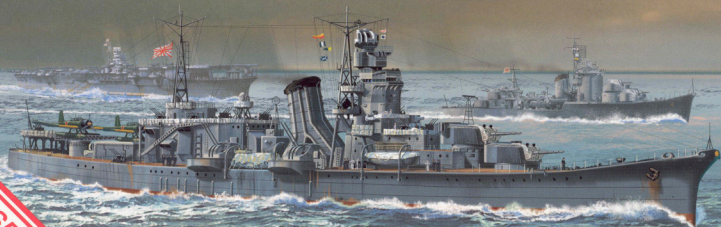


4025

Japanese Light Cruisers of World War II

in action



SPECIAL
8 EXTRA PAGES



Warships Number 25

Don Greer

squadron/signal publications

Japanese Light Cruisers of World War II

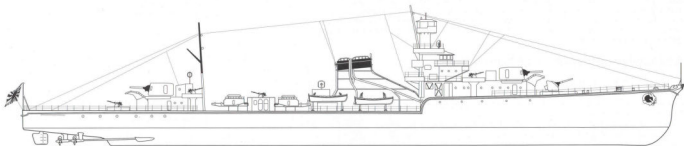
in action

By Wayne Patton

Color by Don Greer

Line art by David Gebhardt and Darren Glenn

Editor: J. Michael McMurtrey



Warships Number 25
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(Cover) Japanese light cruiser *Oyodo* and heavy destroyer *Akizuki* sweep southward ahead of fleet carrier *Zuikaku* and other units of Chujo (Vice Admiral) Ozawa's Mobile Fleet on the morning of 25 October 1944. Later that day off Cape Engaño, flagship *Zuikaku* was damaged by U.S. aircraft from carriers *Essex* and *Lexington*, and *Oyodo* took Vice Admiral Ozawa and his staff off the listing carrier (see photo on page 58). During these operations *Oyodo* was hit by two rockets fired by a Hellcat fighter, resulting in light damage, but escaped and reached safety on 27 October.

Acknowledgements and Photo Credits:

Yamato Museum, Kure, Japan

U.S. Naval Archives

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I want to thank the following individuals for helping in my quest for rare and original photographs of IJN light cruisers: David Luke and his wife Yumiko, who helped with translation and legal correspondence and in meetings with officials at the Yamato Museum in Kure, Japan. I express thanks to officials at the Yamato Museum for their patient assistance and wonderful information in helping to locate appropriate photographs of IJN cruisers in their files.

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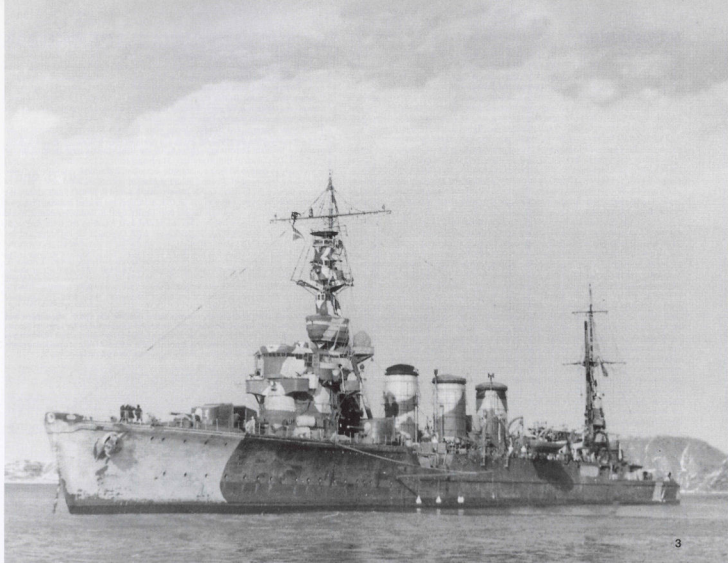
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Dedication:

To my nephew Kenny, with thanks for his support.

(Right) Light cruiser *Tama* at anchor off Paramusir (a Japanese-held island just south of the Kamchatka Peninsula) in 1942 during the campaign to take Kiska Island. *Tama*, like *Kiso*, was camouflaged with white patches over the usual medium gray.



Introduction

When the Imperial Japanese Navy (IJN) went to war with the allies on 7 December 1941, the backbone of the light, or "B" class, cruiser force was made up of elderly 5,500-ton light cruisers. The newest of these warships were three units of the *Sendai* class, which had been commissioned during 1925. The new *Mogami* and *Tone* classes of 10,000-ton light cruisers had been secretly designed with 15.5 cm (6-inch) main armament in triple turrets that could be changed over to 20.3 cm (8-inch) main guns in double turrets, thereby converting them into "A" class or heavy cruisers. The four *Mogami*-class and two *Tone*-class light cruisers were thus modified and entered World War II as part of the IJN heavy cruiser force.

The IJN, at the beginning of World War II, operated a light cruiser force of two 3,500-ton warships of the *Tenryu* class, fourteen 5,500-ton warships of the *Kuma*, *Nagara*, and *Sendai* classes, the experimental *Yubari* of 3,560 tons, and three "training cruisers" of the *Katori* class, a total of 20 ships compared to the 26 light cruisers with which the U.S. Navy entered the war. During the course of the war, Japan constructed only four *Agano*-class light cruisers and one of the new *Oyodo*-class seaplane cruisers. During this same period the United States launched some 34 light cruisers of the *Atlanta*, *Cleveland*, and *Worcester* classes. Obviously Japan could not match the industrial might of the United States.

Based on experience during World War I, IJN doctrine and strategy led to the development of light cruisers with high top speed, carrying seaplanes and heavy torpedo armament, intended to be used as flagships for destroyer flotillas. Most U.S. light cruisers, with the exception of the *Atlanta* class, did not carry torpedoes and were designed to operate with heavy cruisers or as anti-aircraft escort for carrier groups or battleships. Later U.S. "light" cruisers tended to be very heavy (more than 10,000 tons), whereas later classes of Japanese light cruisers were designed to be small and fast due to the need to operate them with destroyers. Of the 25 light cruisers in service with the IJN during World War II, nine were sunk by U.S. or British submarines, 11 were sunk by U.S. aircraft, two were sunk by U.S. torpedo boats or destroyers, and three were still afloat at the end of the war. Japanese light cruisers were particularly vulnerable to submarine attack and to skip bombing attacks carried out by low-flying bombers.

Prior to the 1910 launch of the first true Japanese light cruiser, the IJN had operated a mixed group of "protected" or very lightly armored cruisers, built in British, French, American, and Japanese shipyards, as well as three classes of ex-Russian protected cruisers, which had been captured during the Russo-Japanese War. The great French ship designer Emile Bertin designed the *Itsukushima*-class protected cruisers and reorganized the Japanese dockyards in the late 1880s. The most successful of the Japanese-designed and Japanese-built protected cruisers was *Tone*, the first to have the rakish "clipper" bow found on later Japanese cruisers. *Tone* was designed by Taisa (Captain) Kondo Motoki of the Navy Technical Department and was the first large ship to be constructed at Sasebo Naval Yard. Launched in 1910, *Tone* was 115.8 meters (380 feet) long, displaced 4,900 tons, had a top speed of 23 knots, and was a popular ship with the Japanese press and public.

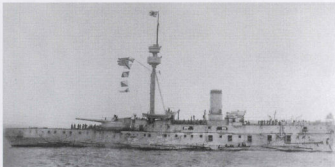
The design of *Tone* led to the *Chikuma* class of Japanese light cruisers, which were launched between 1910 and 1912. Comparable to the British Weymouth-class cruisers, *Chikuma* and sister-ships *Hirado* and *Yahagi* were 144.8 meters (475 feet) long, displaced 5,040 tons, and could make 26 knots. During World War I, the concept of the light cruiser as a leader of destroyer flotillas took shape, as did the idea that these warships should carry spotter aircraft. The *Chikuma* class was too slow to fill this mission, and the new *Tenryu* class, with a top speed of 33 knots, became the first modern Japanese light cruisers adequate for the planned role of destroyer flotilla flagship. Kondo, now a Shosho

(Rear Admiral) and Taii (Lieutenant) Yatsushiro were responsible for the design of the *Tenryu*-class light cruisers, which was inspired by the British *Arethusa*-class light cruisers. The *Tenryus* were to provide accommodations for flag officers and staff and, tactically, were to lead destroyer sentais (squadrons) in torpedo attacks against enemy ships while protecting destroyers against shellfire from enemy destroyers and accompanying cruisers. *Tenryu*-class light cruisers were 142.6 meters (468 feet) long, 9.1 meters (30 feet) longer than similar British ships due to the need to contain five boilers, torpedo armament, and the four main guns. To hold weight down and improve strength, the IJN used hardened steel for the first time in the construction of this class.

The *Kuma*, *Nagara*, and *Sendai* classes were longer and heavier versions of the *Tenryu* class and were designed by Shosa (Lt Commander) Kawase Teiji, head of the Construction Program Department. These 5,500-ton light cruisers were inspired by the late "C" and "D" classes of British cruisers. The longer hulls of 162.9 meters (534.7 feet) were necessary to contain all the guns, torpedo armament, and aircraft catapults, and were designed for a top speed of 36 knots to allow them to operate with the new classes of destroyers then on the drawing boards. Armor was designed to protect vitals against the 4-inch (10.2 cm) main guns then in use on U.S. destroyers but proved inadequate against the 5-inch (12.7 cm) guns in single turrets later carried by U.S. destroyers during World War II. These light cruisers not only served as destroyer flagships but were also organized into cruiser sentais (squadrons) and were used to protect capital ships and sea routes. They fought in all Pacific actions during World War II and were all sunk with the exception of *Kitakami*, which was in training status in the Inland Sea and surrendered in August 1945.

Due to changing night battle strategy, the 5,500-ton light cruisers *Ooi* and *Kitakami* were modified during 1940-41 into torpedo cruisers each carrying ten trainable, quadruple mounts for the oxygen-powered "Long Lance" torpedoes. The potential broadside of

French influence over Japanese shipbuilding lasted until the late 1880's. *Matsushima* was designed by the great French engineer Emile Bertin and constructed by La Seyne in France. The second-class cruiser differed from her two sister ships in having the single 12.6-inch gun mounted aft to give her better seakeeping. She was lost in 1906 as a result of a magazine explosion. French thinking did not influence Japanese cruisers used during World War II.

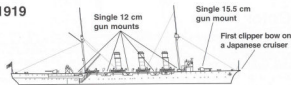


Itsukushima, 1889



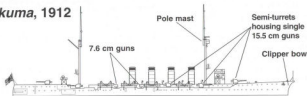
This group of second-class cruisers marked the end of French influence in Japanese shipbuilding. *Itsukushima* and *Hashidate* had the single 32 cm (12.6-inch) gun mounted on the foredeck unlike *Matsumura*, which mounted the gun aft.

Tone, 1919



The first *Tone* was Japanese-designed and built and was very popular with the Japanese media of the time. This light cruiser introduced the clipper bow found on many later Japanese cruisers.

Chikuma, 1912



This was the first class of modern cruisers in the Imperial Japanese Navy, but at 26 knots they were too slow for the intended role of destroyer flotilla flagship.

Mogami, 1938



This class was designed as large light cruisers, much like USS *Brooklyn*. However, following mounting of 20.3 cm (8-inch) guns, these warships entered World War II as heavy cruisers.

20 torpedoes was a withering prospect for U.S. warships during night action, but after initial defeats the U.S. Navy avoided night combat, and the two light cruisers proved vulnerable to air attack. During 1944 and 1945, the damaged *Kitakami* was further modified as a Kaiten ("Heaven Shaker") manned torpedo carrier and was involved before the end of the war in training crews for the lethal, suicide torpedoes. Lack of fuel prevented *Kitakami* from taking part in the last naval actions around Okinawa in 1945. There were additional wartime plans to convert some of the 5,500-ton light cruisers to minelayers, training ships, and anti-aircraft cruisers, but most of these were never carried out. Only *Isuzu*, following damage caused by aerial attack, was modified into an anti-aircraft cruiser. Ironically, *Isuzu* was placed on anti-submarine duty following her refit and was finally sunk by a U.S. submarine.

The 5,500-ton light cruisers were so long and heavy for the weapons mounted that they represented a dead end to the design philosophy that originated with the protected cruiser *Tone* in the late 1890s. Taisa (Captain) Hiraga Yuzuru, who had been studying the fine art of constructing warships in Britain and other countries, developed new ideas to hold weight down while increasing armament and speed. Officials in the IJN listened, and Hiraga, along with Shosa (Lt. Commander) Fujimoto Kikuo, started the design in 1919 for the experimental light cruiser *Yubari*, which was to be the basis for future Japanese heavy cruiser development. At the time, warship design was a compromise among the conflicting demands of offense (guns, torpedoes, and aircraft), defense (armor, anti-torpedo protection), and speed. To improve any two of these qualities naturally resulted in a degradation of the third, unless tonnage increased or a design breakthrough that held tonnage down was achieved. For example, the 5,500-ton light cruisers were so long, due to the need to keep them narrow for speed and to fit all the machinery and armament within the hull, that armor protection suffered. The two gifted designers Hiraga and Fujimoto, by working the side armor belts into the structure of the hull, achieved a breakthrough that allowed the 3,560-ton *Yubari* to mount the same offensive weapons as the 5,500-ton light cruisers but with better armor and a similar top speed. *Yubari* was the first Japanese warship to have the characteristic, trunked funnels, which reduced stack numbers and directed smoke away from the bridge, along with the curved bow, used later on all classes of cruisers and destroyers. *Yubari* proved superior to the U.S. Navy's *Omaha*-class light cruisers as well as the British "C"-class light cruisers. In fact, *Yubari* was so successful that Hiraga and Fujimoto were put to work designing the next generations of heavy cruisers, and Hiraga later was responsible for design of the super battleships *Yamato* and *Musashi*. Light cruiser construction languished until units of the 10,000-ton *Mogami* class were designed and constructed as large light cruisers similar in concept to the U.S. Navy's *Brooklyn* class. However, they, along with the *Tone* class, had secretly been designed for conversion to heavy cruisers with 20.3 cm (8-inch) guns and fought in World War II as "A"-class cruisers.

It was not until the *Agano* class was designed by Shosho (Rear Admiral) Fukuda Keiji and Shosa (Lt. Commander) Ozono Daisuke that replacements for the aging 5,500-ton light cruisers seemed possible. The hull lines and other aspects of the basic design differed considerably from ship designs of Hiraga and Fujimoto dating from the 1920s. In fact, the basic *Agano* design became known in IJN circles as the "Fukuda-style Ship Model."

Agano appears at first glance to be small and lightly armored and armed when compared to large U.S. light cruisers like the *Cleveland* class. At full war load *Agano* displaced 8,534 tons as opposed to the USS *Cleveland* of (► 6)



Shosho (Rear Admiral) Hiraga Yuzuru was a talented and original naval constructor responsible for the design of the battleships *Fuso*, *Yamashiro*, *Mutsu*, and *Nagato*. He also participated in the design of *Yamato* and *Mushasi* but is well known for his design of the experimental light cruiser *Yubari* and subsequent heavy cruisers.

needed the cruisers' reconnaissance aircraft to locate enemy ship formations. However, by late 1943 it was recognized that these tactics had failed, and remaining submarines were increasingly used to haul supplies to isolated Japanese Army units. Some huge Sen-Toku submarines of the *I-400* class (*I-400* through *I-405*) were designed to carry their own Aichi M6A1 Seiran aircraft for both reconnaissance and bombing missions.

Following heated debates, *Oyodo* emerged as a 10,000-ton light cruiser similar in concept to the *Tone*-class heavy cruisers with six 6-inch (15.5 cm) main guns in two triple turrets on the foredeck, leaving the afterdeck free for aircraft operations. *Oyodo* also had a large hangar on the afterdeck, allowing her to be used later in her career as a fleet flagship with naval staff living in the modified hangar. As a "floating staff headquarters" *Oyodo* was generally kept away from battle and was still afloat during the spring of 1945 near Kure Harbor when she was finally sunk by U.S. aircraft.

Well into the late 1930s, midshipman training was carried out with the old armored cruisers *Asama*, *Iwate*, and *Yakumo*, but as the IJN prepared for war, more training capacity was needed. Original plans called for three "B"-class 5,500-ton cruisers to be remodeled into training cruisers, but these plans were cancelled when *Ooi* and *Kitakami* were converted into torpedo cruisers. But the need to train additional personnel still existed, especially so after *Asama* ran aground in 1935 and was badly damaged, and plans were made to construct new ships specially designed for open ocean training of cadets. These units were not intended as warships because they were optimized for the training role. However, accommodations aboard the new *Katori*-class ships were so good in comparison to other IJN warships that they were used in wartime as flagships of area fleets.

14,131 tons full war load. This was because the *Agano*-class cruisers were designed as lightly protected, fast leaders for destroyer sentais (squadrons). They were originally to have eight 15.5 cm (6-inch) main guns in two quadruple turrets. However, the design was altered, and the cruisers of this class ended up with six of the 15.5 cm guns in three double turrets, with two quadruple torpedo launchers along with the capacity to carry two floatplanes. As destroyer sentai leaders the *Agano*-class light cruisers were very fast, with a top speed of 35 knots, and lethal with their heavy torpedo armament and spotter planes. They were designed to perform a different mission than U.S. light cruisers, which generally did not have torpedo armament and tended to be used as anti-aircraft ships.

The last light cruiser to be ordered by the IJN was *Oyodo*, which had been designed as a larger *Agano* by naval constructors Fukuda and Ozono. This "C"-class light cruiser was the subject of much debate as the fortunes of war drastically changed for the Japanese. *Oyodo* was to have been a submarine sentai (squadron) flagship with a carrier-like deck complete with two catapults. Japanese submarines at the time did not operate singly or in "wolf-packs" against merchantmen and supply convoys like German or U.S. submarines but operated almost exclusively in picket lines against enemy warships and

Katori and sister-ships *Kashima* and *Kashii* were not considered "B"-class cruisers but belonged to the "J" class of ships named after famous shrines in the homeland. The Allies, however, regarded these training ships as light cruisers even though the design lacked the strength, armament, and speed of true cruisers as defined prior to World War II. The closest equivalent to *Katori* was the French training cruiser *Jeanne d'Arc*, which was larger at 8,950 tons full load but with a greater top speed of 25 knots. *Kashima* was still afloat at the end of the war, and a fourth unit, *Kashiwara*, was cancelled early in the war and broken up on the ways.

Color Notes

While the IJN specified a single shade of gray for all warships (approximately equivalent to FS595: 35164), each of the four major navy yards — Sasebo, Kure, Maizuru, and Yokosuka — mixed their own. None of the shipyard colors precisely matched the specification, and none matched each other. Chips of these colors are available from Snyder & Short, and all four of the grays are available from White Ensign Models in their 'Colourcoats' range of enamels.

Hulls below the waterline were painted in a red-brown primer (approximate FS595: 31310). Funnel tops and upper parts of the mainmasts were painted glossy black. Linoleum used on decks was a pinkish tan (approximate FS595: 20233). The chrysanthemum carried by all light cruisers on the bow was polished brass. Canvas shrouds were generally white or cream colored.

Exceptions to this standard paint scheme were the light cruisers *Tama*, *Kiso*, and *Abukuma*, which were part of Sentai 21 during the Aleutian Operation. Their camouflage consisted of white bows and sterns with white patches in the superstructure that contrasted sharply with the standard medium gray of the remaining parts of the ships.

Dimensional Notes

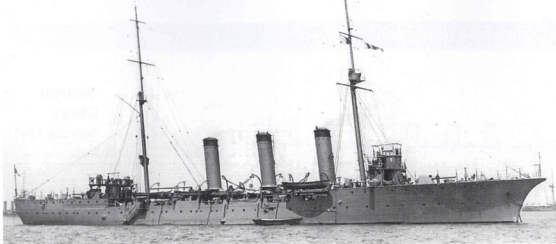
Prior to Japan's adoption of the metric system in 1921, some warship designs were made in English measurements. In this volume, dimensions of ships are given first in metric units, with the English units in parentheses.

English measures were also used in the official designation of naval guns before 1917, but changed thereafter to metric. However, the "official designation" of a naval gun was generally not its actual caliber but instead a "nominal caliber" rounded-off to the closest whole number from the actual caliber. For example, the "8 cm" gun had an actual caliber of 7.62 cm because it was based on a 3-inch Vickers prototype. In this volume, the official IJN designations for Japanese naval guns are used, with nominal calibers given first in metric units and the English equivalent in parentheses. (► 10)

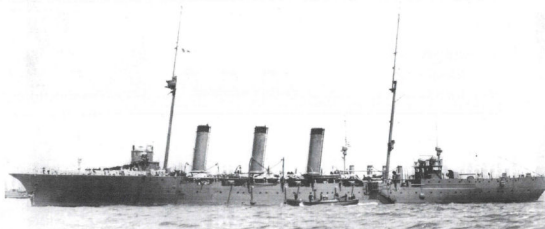


Shosho Fujimoto Kikuo succeeded Hiraga in command of the shipbuilding section of the IJN. He allowed the Naval Staff to pile more guns, torpedo launchers and aircraft catapults on limited design thereby making the resulting warships top heavy. He was blamed for the capsizing of the gunboat *Tomazuru* and relieved of command in 1934.

The 23-knot *Tone* was a very graceful cruiser in 1910. Her design and success definitely influenced the design of future Japanese light cruisers.



Tone, seen here in 1919, shows the rakish clipper bow which ended up being standard on many classes of heavy and light Japanese cruisers. The four-stack ship behind *Tone* appears to be a *Chikuma*-class light cruiser.



Japanese Light Cruiser Development



**Tenryu
Class**

Tatsuta, 1941



**Kuma
Class**

Tama, 1941



**Nagara
Class**

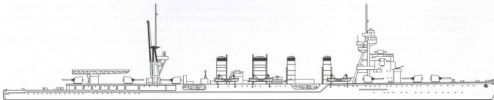
Abukuma, 1941



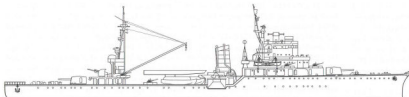
**Yubari
Class**

Yubari, 1937

Japanese Light Cruiser Development



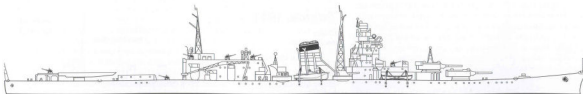
**Sendai
Class**
Sendai, 1941



**Katori
Class**
Kashii, 1944



**Agano
Class**
Yahagi, 1945



**Oyodo
Class**
Oyodo, 1944

Tenryu Class

Experience during World War I convinced planners in the IJN that the proper role of the "B"-class (light) cruiser was that of leader of a fast destroyer sentai (squadron). As the previous *Tone* and *Chikuma* classes were not fast enough to carry out this mission, a new class of small, light cruisers was ordered. The lead ship *Tenryu* and sister-ship *Tatsuta* were known as 3,500-ton or "small-model cruisers" and were named after homeland rivers. To achieve the high top speed of 33 knots with the boiler designs of the time, numerous weight-saving measures were used, including the first Japanese use of high tensile steel for construction of the hull instead of mild steel. A narrow destroyer hull design was used, as was destroyer-type fast-running machinery, resulting in a longer hull than in previous light cruisers in order to contain the required ten boilers and to have enough room to mount the gun and torpedo armament. The high length-to-beam ratio of 11/3 was a distinctive feature of these ships, and a similar ratio carried over to the next three light cruiser classes as well. *Tenryu* and *Tatsuta* were the first true Japanese light cruisers and had very long careers lasting from their launch in 1918 to the loss of *Tenryu* in December 1942 and *Tatsuta* in March 1944.

In wartime form, *Tenryu*-class light cruisers were 142.7 meters (468 feet) long with a beam of 12.3 meters (40.5 feet) and a mean draft of 3.9 meters (13 feet). Standard *Tenryu* displacement was 3,230 tons while their "trial displacement" (defined as full load displacement less one-third full load fuel oil, potable and reserve feed water, and provisions) was 4,168 tons. Full war load increased to 4,621 tons. Ten Kanton destroyer-type boilers drove three sets of geared turbines providing 51,000 shaft horsepower and turning four shafts with three-bladed propellers. Maximum speed was 33 knots. Planned radius of action was 5,000 nautical miles at 14 knots. Complement was 337 officers and men.

Tenryu-class side armor was a 2-inch (50.8 mm) waterline belt. The deck was armored with 1-inch (25.4 mm) steel plates, and the conning tower was unprotected.

Tenryu-class main armament in wartime was four 14 cm (5.5-inch) Type 3 main guns in four single mounts. These were arranged two on the foredeck and two on the afterdeck. The secondary battery during wartime consisted of up to ten 25 mm (1-inch) heavy machine guns in five twin mounts as carried by *Tatsuta* during 1944. Six 53 cm (21-inch) Type 6 torpedoes were carried in two triple, trainable mounts.

Lead ship *Tenryu* was laid down on 17 May 1917 at the IJN's Yokosuka Naval Yard and launched in March 1918. *Tatsuta* was laid down on 24 July 1917 at the IJN's Sasebo Naval Yard and launched in May 1918. Following their commissioning in 1919, *Tenryu* became flagship of Destroyer Sentai 2, and *Tatsuta* was assigned as flagship of Destroyer Sentai 1. Until they were lost during World War II, *Tenryu* was assigned to Kure Naval Station, and *Tatsuta* was assigned to Sasebo Naval Station. Both light cruisers patrolled the Yangtze River and the Shanghai area during riots in 1927 and again during 1931. Later, *Tatsuta* patrolled northern Chinese waters near Tsingtao. During the mid-1930s the light cruisers took part in patrols and training missions and were placed in reserve at their respective stations where they were refitted during late 1938. Major changes included installation of oil-firing boilers and replacement of the 8 cm (3-inch) and 13 mm (.52-inch) gun mounts with two twin mounts of 25 mm (1-inch) Type 93 heavy machine guns. Plans to remodel them into anti-aircraft cruisers were dropped due to the construction of the *Akizuki*-class large anti-aircraft destroyers, which displaced 3,700 tons full load and were longer than the *Tenryu*-class light cruisers.

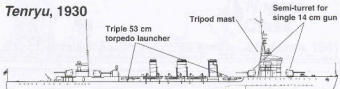
Tenryu and *Tatsuta* entered World War II in nearly the same configuration as when they were launched in 1918. They operated with light cruiser *Yubari* and destroyers as part of

Sentai 18 during the seizure of Wake Island at the beginning of hostilities against the United States. *Sentai 18* took part in actions around Truk Atoll and helped cover landings at Lae and Salamaua, New Guinea, over the next few months. They covered landings on Shortland Island, returned to the anchorage in the Mowe Passage near Kavieng, New Ireland, and then to Truk on 10 April 1942. Following the cancellation of the invasion of Port Moresby, New Guinea, *Tenryu* and *Tatsuta* returned to Maizuru Naval Yard in Japan where both were dry-docked and refitted during June 1942. They returned to Truk, joining up with *Yubari* in time for the Solomons Campaign. From 30 June to 6 July 1942 *Sentai 18* escorted transports carrying an airfield construction unit to Guadalcanal. After this the two cruisers joined elements of the Eighth fleet, which was assigned to protect the Bismarck, Solomon, and Papua Islands.

While *Tatsuta* was supporting the abortive landings at Buna, *Tenryu* sortied with heavy cruiser *Chokai* and took part in the Battle of Savo Island, or the First Battle of the Solomons, as the Japanese called it, on 8 August 1942. *Tenryu* fired 80 14 cm (5.5-inch) shells and six 53 cm (21-inch) torpedoes in this battle. Following the Japanese victory at Savo Island in a battle that resulted in several Allied heavy cruisers sunk in night action, *Tenryu* and *Tatsuta* took part in several support missions to Buka and Guadalcanal and supported action to take an Allied airfield at Gili Gili. Then, on 2 October 1942, *Tenryu* was struck by a bomb was dropped by B-17 bombers of the 19th Bomb Group of the 5th Air Force. Twenty-three crew men were killed, but the damage was patched up locally by the repair ship *Yamabiko Maru*, and *Tenryu* was soon back in action. On 13 November 1942, *Tenryu* and her destroyers provided cover for the heavy cruisers *Suyosa* and *Maya* as they bombarded Henderson Airfield on Guadalcanal. On 10 December 1942 *Sentai 18* was deactivated, and *Tenryu* and *Tatsuta* were attached directly to the Eighth Fleet. Then on 18 December 1942, while escorting transports that were to land troops at Madang, New Guinea, the fleet was attacked by B-17 bombers, which damaged the transport *Gokoku Maru*. While covering the landings, *Tenryu* was hit by torpedoes fired by the submarine USS *Albacore*, after which the valiant light cruiser turned over and rapidly sank. She was removed from the Navy List on 1 February 1943.

Tatsuta was refitted at the Maizuru Naval Yard during February 1943 and later was assigned as the flagship of the newly formed destroyer *Sentai 11* attached to the third fleet. The

Tenryu, 1930



Tatsuta, 1941



light cruiser trained in the Inland Sea and then assisted in transporting troops to Ponape from 22 to 27 October 1943. By early 1944 the Pacific had turned into a far more dangerous place and in March, while escorting a convoy to Saipan, two torpedoes of a spread of four fired by the submarine USS *Sand Lance* hit *Tatsuta*. The submarine's other two torpedoes hit the overlapping target *Kokuyo Maru*, and both ships sank at the same time. *Tatsuta*, whose career had lasted from 29 May 1918 to 13 March 1944, was removed from the Navy List on 10 May 1944.

Kuma Class

Fifteen 5,500-ton light cruisers were laid down and completed between 1920 and 1925. These light cruisers shared the same hulls but belonged to three distinct classes. The five Model 1 ships of the *Kuma* class were the first to be designed and built, followed by six Model 2 ships of the *Nagara* class and three Model 3 ships of the *Sendai* class. All these light cruisers were named after homeland rivers according to the custom at that time.

While *Tenryu* and *Tatsuta* were being constructed, design was started on the *Kuma*-class light cruisers. These new warships had the same basic hull design as the earlier class but were one deck higher amidships and were longer to make room for more powerful machinery. The *Kuma* class, as well as the next two classes of 5,500-ton light cruisers, was designed for a top speed of 36 knots to enable them to operate with new, fast destroyers. The higher freeboard was meant to improve seaworthiness as well as to provide living quarters for additional officers and men. Between the foremast and the number one stack this class had a characteristic deck well which contained a torpedo launcher. *Kuma* and sister ships *Tama*, *Kitakami*, *Ooi*, and *Kiso* were to serve as destroyer sentai flagships, operate with cruiser sentais directly attached to fleets, and protect trade routes. But there were never enough cruisers to do all that was required of them, and as a result the last assignment was neglected, allowing the Japanese merchant fleet to be picked off by Allied submarines, aircraft, and surface warships, an oversight fatal to Japan's war effort.

The *Kuma* class was originally fitted with 53 cm (21-inch) torpedo tubes, but later, when they became available, 61 cm (24-inch) Type 8 mounts for the lethal "Long Lance" torpedoes were fitted. Seaplane catapults added during the 1930s were removed during wartime, and heavy, standardized anti-aircraft armament was added.

Kuma-class light cruisers were 162 meters (532 feet) long with a beam of 14 meters (46.5 feet) and a mean draft of 4.8 meters (15.8 feet). Standard *Kuma* displacement was 5,603 tons while trial displacement was 6,431 tons. Full war load increased to over 7,094 tons during World War II. The *Kuma* class had 12 Kanpon three-drum water-tube, oil-fired boilers driving four sets of geared turbines. Available 90,000 shaft horsepower turned four screws to provide a maximum speed of 36 knots. Planned radius of action was 5,000 nautical miles at 14 knots. Complement was 450 officers and men, sometimes including flag officers and staff.

Kuma-class armor was a side belt 73.2 meters (240 feet) long by 4.9 meters (16.1 feet) high and 63.5 mm (2.5 inches) thick. The deck was armored by 1.1-inch (28.6 mm) plates. This armor was intended to protect the ship's vitals against 4-inch shells carried by contemporary U.S. destroyers. However, during World War II, U.S. destroyers carried five 5-inch (12.7 cm) guns, to which the Japanese 5,500-ton light cruisers were more vulnerable.

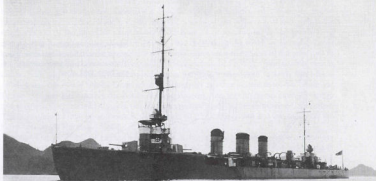
The armament of the *Kuma* class in wartime was seven 14 cm (5.5-inch) Type 3 main guns in single mounts. Some of these main guns were removed during World War II from some cruisers in favor of standardized 25 mm (1-inch) heavy machine guns mounted in triple or double mounts. Some *Kuma*-class warships carried up to 36 of the heavy machine guns in various combinations of mounts. Sixteen 61 cm (24-inch) torpedoes were carried, to be launched from

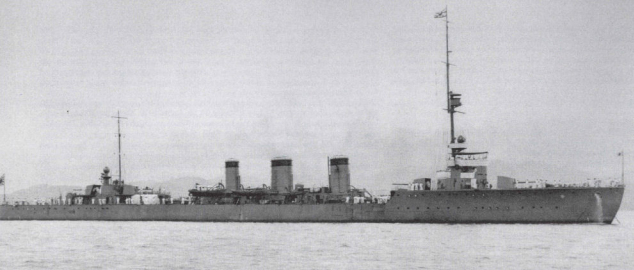
four twin or quadruple mounts. In addition, these light cruisers could carry up to 48 mines. Some ships of the class had single centerline catapults and carried one seaplane. Some of these were removed during World War II in favor of additional heavy machine gun mounts. Two ships of this class, *Ooi* and *Kitakami*, were modified during 1940 and 1941 to mount ten quadruple torpedo launchers for "Long Lance" torpedoes. Later, *Kitakami* was again modified to carry eight Kaiten ("Heaven Shaker") manned suicide torpedoes, which could be launched two at a time from side-mounted rails.

The *Kuma*-class light cruisers were all laid down between 10 August 1918 and 10 June 1919 and were launched between 14 July 1919 and 14 December 1920. *Kuma* and *Kitakami* were built by the IJN at the Sasebo Naval Yard, *Tama* and *Kiso* were built by Mitsubishi at Nagasaki, and *Ooi* was constructed by Kawasaki at Kobe. Following commissioning in 1921, *Kuma*, *Tama*, *Ooi*, and *Kiso* were registered at Kure and became part of Sentai 4 of the Second Fleet as well as flagships of destroyer sentais. During 1922 the Second Fleet was disbanded due to the Washington Naval Treaty, and the light cruisers of Sentai 4 were transferred to cruiser Sentai 3 of the First Fleet. *Kitakami* was registered at Yokosuka and assigned as flagship of destroyer Sentai 3, later participating in training cruises in the Sea of Japan. During war games on 20 October 1930 *Abukuma*, a *Nagara*-class light cruiser, accidentally rammed *Kitakami* which suffered only minor damage above the waterline and on the port torpedo launcher. The entire bow of the *Abukuma* was knocked off, and the ship was almost lost.

Seaplane catapults were added to all the *Kuma*-class light cruisers during refitting between 1930 and 1934. Several plans to modify the *Kuma*, *Tama*, and *Kitakami* into minelayers and training ships were cancelled when Japan decided to renounce the naval treaties. Perhaps the most significant pre-war modification to the 5,500-ton light cruisers was the rebuilding of *Kitakami* and *Ooi* into "Heavy Torpedo-Equipped Cruisers." During 1936 the Naval General (► 13)

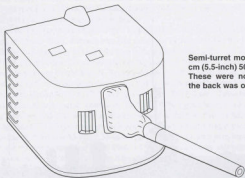
Tatsuta at Yokosuka on 25 August 1919 shortly after completion. The single foremast was later replaced with a tripod mast. These light cruisers were designed to be destroyer flotilla flagships, but contemporary destroyers were so fast that more capable light cruisers were needed.





This starboard view of *Tatsuta* on 25 August 1919 shows that the trainable launchers for the 53 cm (21-inch) torpedoes were very close to the water. They were elevated in 1928 to reduce wetness. Later classes of Japanese destroyers were longer and more heavily armed than these small light cruisers.

Armament

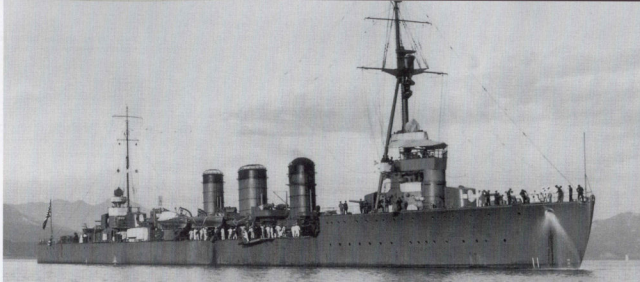


Semi-turret mounting a single 14 cm (5.5-inch) 50-caliber main gun. These were not true turrets, as the back was open.

This 1927 photograph shows a remarkable line up of the battleships *Mutsu* and *Nagato* with the light cruiser *Tatsuta* on the right. The extensive rigging of the *Tatsuta* is clearly visible.



Tenryu weighs anchor in Kure Harbor in late 1930. The new tripod foremast is clearly visible as is the new RDF antenna added in 1922 between the aft funnel and the mainmast. The torpedo tube mounts had been raised by this time, and a new lookout post installed below the upper spar on the foremast.



Staff worked out a plan to counter the numerical superiority of the U.S. fleet by attacking at night with ships armed with the new and very lethal Type 93 oxygen-powered torpedoes, prior to daylight action between main battle fleets. Class "A" heavy cruisers armed with the "Long Lance" torpedoes would blast a hole through the U.S. defensive ring, allowing torpedo cruisers to make devastating torpedo runs on U.S. warships. The two light cruisers were modified to mount no fewer than ten quadruple torpedo launchers, and the potential broadside of 20 "Long Lance" torpedoes would have been a frightening prospect for the U.S. battle fleet. However, following several nocturnal defeats, the U.S. Navy avoided night action until the availability of radar controlled guns made the concept of the "Heavy Torpedo-Equipped Cruiser" obsolete.

During World War II the anti-aircraft armament was standardized and increased in all *Kuma*-class ships, and No. 21 air-search radar units were added.

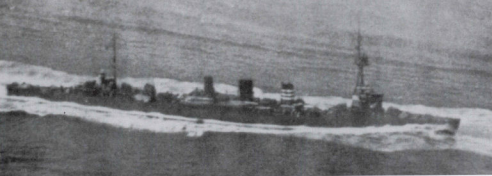
Kuma was assigned to Sentai 16 at the start of World War II and took part in the invasion of the Philippines, later providing cover for the landings in western Mindanao and Cebu. While rounding Cebu, *Kuma* was hit by what turned out to be a dud torpedo fired by a PT boat. Following this incident the light cruiser covered landings at Corregidor and stayed as a guard-ship off Manila for a time. After a refit, *Kuma* was transferred to Sentai 16 in the Dutch Indies, where she carried out supply and transport missions as well as serving as guard-ship at Makassar. During the first week of January 1944, *Kuma* made a final transport run from Singapore to Penang with heavy cruisers *Ashiyara* and *Aoba*. While at Penang, *Kuma* took part in anti-submarine patrols but was attacked by the British submarine HMS *Tally Ho*, which put two torpedoes into her starboard side. She quickly sank stern-first. *Kuma* was removed from the Navy List on 10 March 1944.

Tama and *Kiso* operated together as part of Sentai 21 with the Fifth Fleet at the start of World War II. Following cruises in northern waters, both ships, along with *Abukuma*, were

camouflaged while preparing for war at Akkeshi, Hokkaido. These warships were among the few camouflaged units in the IJN. During the Aleutian Operation Sentai 21 was assigned to the Kiska Seizure Force, and the two light cruisers, along with destroyers, escorted the invasion force and supported the landings on the Aleutian island of Kiska on 7 June 1942. *Tama*, along with light cruiser *Abukuma*, heavy cruisers *Nachi* and *Maya*, and several destroyers, fought the Battle of the Komandorski Islands, engaging a similar U.S. fleet of heavy cruisers, light cruisers, and destroyers. *Tama* fired four torpedoes and expended 128 shells, but in return was hit by two 5-inch shells on the catapult. The two light cruisers also took part in the reinforcement of the Japanese garrison on Kiska from 11 September to 18 September 1942 and the withdrawal from that island on 28 July 1943. Following the Kiska withdrawal, *Tama* and *Kiso* were assigned as fast transports and carried army units to various island garrisons in the southwest Pacific. Both were damaged in aerial attacks near Cape St. George while steaming to Truk and subsequently underwent repairs until December 1943 (*Tama*) and March 1944 (*Kiso*). Following repair, *Tama* acted as a transport and then helped cover Vice Admiral Ozawa's carrier force during the Battle of Cape Engaño. She was hit by an aircraft torpedo and slowly retired toward Okinawa, only to be torpedoed again by the submarine USS *Jallao*. The light cruiser broke up and sank with all hands on 25 October 1944 and was taken off the Navy List on 20 December 1944.

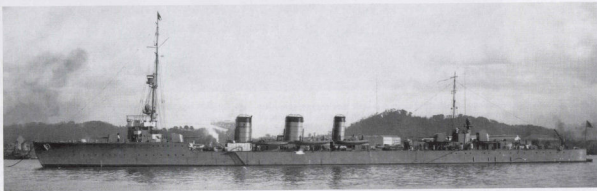
Following the Battle of Leyte Gulf *Kiso* was acting as a fast transport in the Philippines when several bombs dropped by U.S. aircraft from Task Force 38 hit her as she was trying to steam out of Manila Bay on 13 November 1944. The ship settled in shallow water and was taken off the Navy List on 20 March 1945. The wreck of *Kiso* was re-floated on 15 December 1955, towed away, and broken up on 30 January 1956.

(►► 15)



Tenryu off the Japanese bastion at Truk Atoll during July 1936. The tripod foremast is visible.

Tenryu in 1926 prior to modification of her pole foremast and torpedo tubes. Shrouds cover the torpedo launchers.



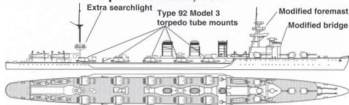
This 1938 view of *Tenryu* clearly shows her tripod foremast and the much taller torpedo launchers, which had been installed to prevent water damage. *Tenryu* and her sister ship *Tatsuta* fought throughout World War II in this configuration.



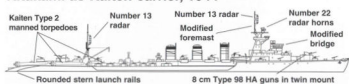
Kitakami, 1937



Kitakami as torpedo cruiser, 1941



Kitakami as Kaiten carrier, 1944



Tama, August 1944



Kiso, August 1944



The torpedo cruisers *Ooi* and *Kitakami* were operating with Sentai 9 at the beginning of World War II and were stationed in the Inland Sea as part of the guard force for the battleship fleet. After escort duty in the Philippines, both light cruisers were modified as fast transports as a result of losses during the Midway battles and Guadalcanal and performed transport duties in the New Guinea and Singapore areas. While on one of these supply runs, *Ooi* was torpedoed by the submarine USS *Flasher* on 19 July 1944 outside Manila and sank following a fire which resulted in loss of the stern. *Ooi* was removed from the Navy List on 10 September 1944.

Kitakami and light cruiser *Kinu* were returning from a transport run when the former was hit by one torpedo fired by the British submarine HMS *Templar*. *Kitakami* was towed to Singapore by *Kinu* where emergency repairs were made. *Kitakami* then escorted transports to Manila where the light cruiser was patched up again at Cavite Naval Base before finally making her way to Sasebo, where she was modified to become a Kaiten ('Heaven Shaker') manned torpedo carrier. *Kitakami* remained in the Inland Sea as a training unit for Kaiten crews until lack of fuel immobilized her near Kure and prevented her from taking part in the last operations around Okinawa. Although near misses by exploding bombs had damaged her engines, the light cruiser was still afloat at the end of the war. *Kitakami* was removed from the Navy List on 30 November 1945 and took part in repatriation duties before being scrapped from 1 October 1946 to 1 April 1947.

Nagara Class

The second class of 5,500-ton light cruisers to be completed, *Nagara* and sister-ships *Isuzu*, *Yura*, *Natori*, *Kinu*, and *Abukuma* were similar to the earlier *Kuma*-class light cruisers, differing in roles, design details, and wartime modifications. These warships were designed to be flagships for cruiser, destroyer, and submarine sentais. As destroyer sentai leaders, the *Nagara*-class light cruisers were fast at 36 knots top speed and were armed during World War II with the lethal Type 93 "Long Lance" torpedoes. As submarine sentai leaders they were originally built with a hangar for small seaplanes beneath the bridge and a flying-off platform extending in front of the hangar, a feature considered top secret and erased by censors from some early photographs. However, this arrangement caused aircraft handling problems, and during the 1930s the flying-off platforms were removed and conventional centerline catapults were installed above the after turrets to accommodate larger and more powerful reconnaissance sea planes. (Contemporary U.S. light cruisers of the *Omaha* class were neither designed to carry seaplanes nor armed with torpedoes; only the much later *Atlanta* class carried torpedoes.) The 5,500-ton cruisers were also to double as minelayers, and each ship carried 48 of the "B" model improved Number 1 mines. The light cruisers used these mines offensively by laying them in front of enemy formations, a concept which did not work very well in actual combat during World War II.

Nagara-class light cruisers were 163 meters (532 feet) in length with a beam of 14.2 meters (46.5 feet) and a mean draft of 4.8 meters (15.9 feet). Standard displacement was 5,708 tons while trial displacement was 6,539 tons. Full war load was over 7,204 tons. The *Nagara* class had 12 Kampon three-drum, water-tube, oil-fired boilers which drove four sets of geared turbines providing a maximum 90,000 shaft horsepower turning four screws. Maximum speed was 36 knots (The comparable USS *Omaha* could achieve 35 knots on 90,000 shp). The *Nagaras* had a range of 5,000 nautical miles at 14 knots. Complement was 450 officers and men.

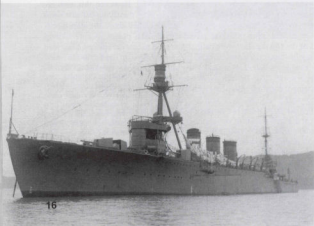
(► 17)



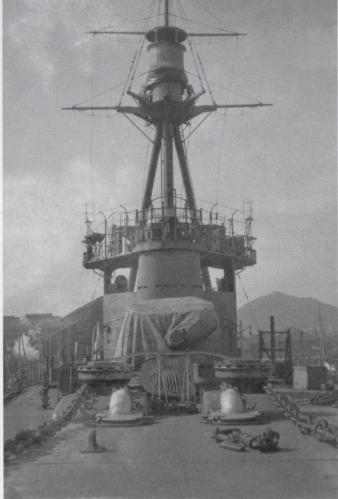
The new class leader *Kuma* running trials on 6 July 1920. The 5,500-ton light cruisers were very long and narrow to make room for the boilers, turrets, torpedo launchers, and aircraft facilities that were carried.



(Above) The boxy conning tower of *Kiso* was designed to house a Type 90 seaplane, which was launched forward over gun mounts one and two. This photograph was taken during mid-1922.



(Left) *Tama* in 1922 clearly shows the alternate type of conning tower used on this light cruiser class. The ship sits quite high. Later, as their displacement was increased, the 5,500-ton light cruisers sat much lower in the water.



The early, clean conning tower and bridge and tripod mast of *Ooi* is evident in this September 1921 image. The front semi-turrets are covered with canvass.



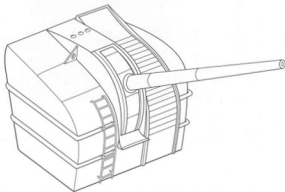
Of taken 22 June 1924. The characteristic well containing a torpedo launcher, just aft of the tripod mast, can be seen.

Nagara-class side armor was a waterline belt 63.5 mm (2.5 inches) thick with the deck protected by 32 mm (1.25-inch) thick steel plates. The conning tower was not armored.

The *Nagara* class was armed with seven 14 cm (5.5-inch) Type 3 main guns in single mounts, four forward and three aft. Secondary armament was two 12.7 cm (5-inch) dual-purpose guns in one double mount. Late in the war the light cruisers carried up to 36 25 mm (1-inch) heavy machine guns in various mounts. Seaplane catapults were removed in favor of larger numbers of heavy machine guns. The ships carried eight 61 cm (24-inch) "Long Lance" torpedoes in four double mounts. *Isuzu* was modified as an anti-aircraft cruiser in 1944 and was armed with six 12.7 cm (5-inch) Type 89 dual-purpose guns in three double mounts along with 37 25 mm (1-inch) Type 96 heavy machine guns in triple, double, and single mounts.

Although class leader *Nagara* was part of Sentai 16 at the start of World War II, the light cruiser was assigned to the Philippine Force along with destroyer Sentaies 2 and 4. *Nagara* took part in landing army units in the Philippines before being assigned to the Eastern Seizure Force in the Dutch Indies where she assisted in transporting army units to Kendari and Makassar before moving to Batavia as a guard-ship. Following this duty, *Nagara* joined the newly formed Destroyer Sentai 10 as flagship. *Nagara* and eleven destroyers took part in the abortive invasion of Midway, the light cruiser taking Chujo (Vice Admiral) Nagumo Chuichi and his staff off the sinking carrier *Akagi* on 4 June 1942 near the end of the battle. By 14 July 1942, Sentai 10 included fifteen destroyers and was assigned to the newly activated Third Fleet. On 24 August *Nagara* and her destroyers escorted the vanguard group of battleships under Shosho (Rear Admiral) Abe during the Battle for the Eastern Solomons. *Nagara* was soon back in combat in Iron Bottom Sound off Guadalcanal; during the night of 14-15 November 1942, the

Armament

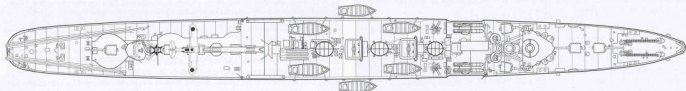
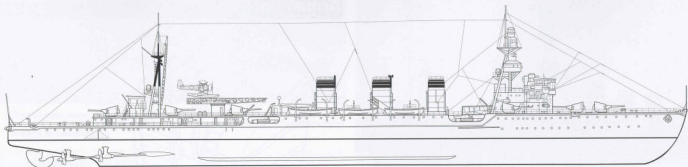


Type 10 single shielded HA mount for a 12 cm (4.7-inch) gun. This replaced the earlier 14 cm (5.5 inch) gun in a semi-turret on some 5,500-ton cruisers as well as *Yubari*.

light cruiser was straddled by shells fired by the heavy cruiser USS *San Francisco* but was not damaged in this bitter action.

Nagara next became flagship of Destroyer Sentai 4 after loss of *Yura*. While she was at anchor off Kavieng, New Ireland, following escort and supply missions, a mine struck *Nagara*. The resulting explosion damaged the hull slightly, but the light cruiser stayed in action. While in action near Kwajalein in the Gilbert Islands, *Nagara* was slightly damaged by near misses, her seaplane set afire, and her rear hull again lightly damaged. During January to April 1944 the light cruiser was at Maizuru Navy Yard for a refit that standardized her anti-aircraft armament as well as her torpedo launchers. On 15 May 1944, *Nagara* replaced the sunken *Tatsuta* as flagship of Destroyer Sentai 11 but was instead used as a fast transport. On 7 August 1944, while returning from a transport run to Okinawa, *Nagara* was struck by one of four torpedoes fired from the stern tubes of the submarine USS *Croaker*. The explosion damaged the rudder and caused rapid flooding of the engine room. Counter-flooding reduced the list but did not prevent the light cruiser from sinking stern first. *Nagara* was removed from the Navy List on 10 October 1944.

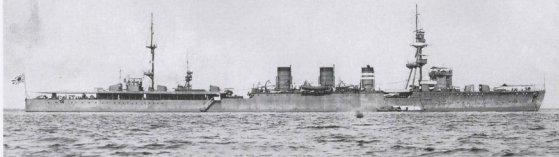
Isuzu was part of Sentai 15 of the Second China Expeditionary Fleet and patrolled off Hong Kong to prevent enemy forces from moving into the city. Following dry-docking, *Isuzu* was assigned to Sentai 16 which consisted of *Natori* and *Kino* of the Second South Expeditionary Fleet. *Isuzu* replaced *Nagara* when the latter became flagship of Destroyer Sentai 10. *Isuzu* carried out transport and guard duties at Surabaya, Balikpapan, and Makassar between April and September 1942. *Isuzu* then replaced the damaged *Sendai* and became flagship of Destroyer Sentai 2 commanded by the aggressive Shosho (Rear Admiral) Tanaka Raizo. Sentai 2 took part in the attack on Henderson Airfield on Guadalcanal on the night of 13-14 October 1942. *Isuzu*, along with heavy cruisers *Maya* and *Myoko*, again attacked Guadalcanal during the night (►► 19)



Kuma-class Light Cruiser Tama, January 1942

Length:162 meters (532 ft)
 Beam:14 meters (46.5 ft)
 Draft:4.8 meters (15.8 ft)
 Displacement: ...5,603 tons standard
 7,094 tons full war load
 Propulsion:90,000 shp/four screws
 Speed:36 knots
 Complement: ...450 officers and men

Armament:7 x 14 cm (5.5-in) guns
 in seven semi-turrets
 4 x 25 mm (1-in) heavy machine guns
 in two double mounts
 8 x 61 cm (24-in) torpedo tubes
 in four double mounts
 (16 torpedoes carried)
 48 offensive mines carried.



Class leader *Kuma* at sea on 12 December 1934. The flared funnels were added in 1930 to prevent stack gasses from reaching the bridge. The new seaplane catapult is clearly visible between main gun semi-turrets E and F. These catapults were never very successful due to tight space and were removed from the *Kuma*-class cruisers during World War II. The aircraft was a Nakajima E4N2 Navy Type 90-2 floatplane.

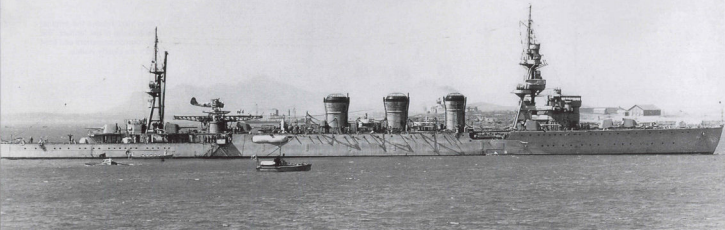


of 15-16 October and escorted destroyers of Sentai 2 during the Battle of the Santa Cruz Islands on 26 October 1942. Following a dangerous repeat mission to Guadalcanal on the night of 13-14 November 1942, *Isuzu* was damaged by two near misses from aircraft bombs in an action which saw heavy cruiser *Kinugasa* sunk and *Chokai* and *Maya* damaged. Between December 1942 and May 1943 *Isuzu* was put into dry-dock for armament changes and the addition of air search radar. Following her refit, she, along with *Naka*, joined the newly formed Sentai 14, which was part of the Fourth Fleet. Upon return to the Central Pacific area the light cruiser took part in supply and escort runs to isolated army units. *Isuzu* was hit and damaged by bombs off Kwajalein Atoll on 5 December 1943. Her rudder was damaged and but repaired enough to return to Truk and later Japan, where she was converted into an anti-aircraft cruiser at Yokohama Naval Yard. All the 14 cm (5.5-inch) mounts were removed and replaced with three twin 12.7 cm (5-inch) high angle guns, her secondary armament was increased to 38 25 mm (1-inch) heavy machine guns, and radar and sonar gear were upgraded. Upon completion *Isuzu* was assigned as flagship of Sentai 31, the antisubmarine mop-up force. The light cruiser was part of the decoy force at Cape Engaño and was slightly damaged by U.S. cruiser fire while rescuing sailors from sunken carriers. Then, while on

Ooi in 1932 retains the original straight form of her funnels. The twin torpedo launchers and boat davits are clearly visible.

a transport run to Brunei, *Isuzu* was hit in the stern by a torpedo fired by the submarine USS *Hake*. After repairs at Singapore, *Isuzu* was sunk in Bima Bay off the Island of Sumbawa by torpedoes launched from submarines USS *Gabilan* and USS *Charr*. *Isuzu* was removed from the Navy List on 20 June 1945, the last 5,500-ton light cruiser to be sunk in combat.

Natori was flagship of destroyer Sentai 5 during the invasion of the Philippines at the start of World War II. The light cruiser was also part of the Japanese force at the Battle of Sunda Strait off Batavia when USS *Houston* and HMAS *Perth* were sunk. Following this battle, *Natori* took part in actions around Surabaya and Makassar. On 9 January 1943 two torpedoes fired by the submarine USS *Tautog* blew the stern off the light cruiser, but *Natori* managed to limp into Ambon Harbor where she was patched up well enough to proceed to Seletar Naval Base at Singapore for temporary repairs. She then went to Maizuru, Japan, where permanent repairs were carried out. Following a lengthy period in dock, *Natori* was assigned as flagship of Sentai 3, which was part of the Central Pacific Area Fleet. On July 21 1944 *Natori* was sent to Manila with supplies for the Army. While escorting transports to Palau, as the small convoy exited the San Bernardino Straits, *Natori* was hit by two Mark 24 (► 23)



Kuma in 1936 shows her modified mainmast with a derrick for handling the E4N2 floatplane.

Ooi cuts through the water at low speed in June 1937 showing her very long and slender hull. Note the lack of a seaplane catapult.



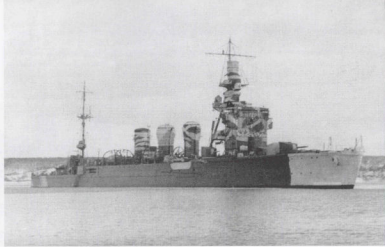
Tama at sea in 1934.





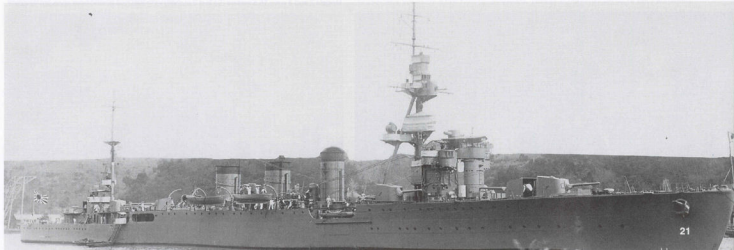
Kiso tied up at a Yokosuka dock on 10 March 1937. The two forward funnels are flared like those of the sister ship *Kuma*. Clearly visible is the box-like structure below the bridge which was once used for seaplane storage. The Imperial chrysanthemum seal shows up plainly on the bow.

Kitakami on 28 February 1940 was much like other light cruisers of the *Kuma* class. Shortly after, she was converted into a torpedo cruiser which could launch a broadside



The camouflaged *Kiso* at anchor, possibly off Akkeshi, Hokkaido, during the Aleutian campaign to take Kiska Island during 1942. *Kiso* and sister-ship *Tama*, along with *Abukuma*, were the only Japanese cruisers to be camouflaged in white and medium gray.

of 20 deadly "Long Lance" torpedoes.



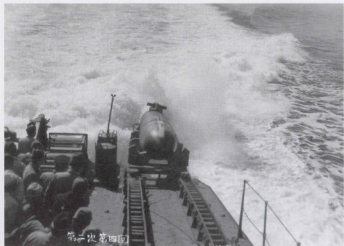


By 19 January 1945, *Kitakami* had been modified to a Kaiten ('Heaven Shaker') transport as seen in this photograph. Launch trials were carried out near Kure on 18 February 1945 with Kaiten Model 2 human-guided torpedoes. Eight Model 4 Kaiten were to have been car-

ried but were not ready by the end of World War II. The sloping launch rails can clearly be seen as well as anti-aircraft gun mounts along the side of the cruiser.

A Kaiten Model 2 on the launch rails on the stern of *Kitakami* during trials on 18 February 1945.

A Kaiten Model 2 enters the sea off the stern of *Kitakami* during trials on 18 February 1945. The Kaiten was designed to slide stern first into the sea at a top speed of 23 knots. Both Kaiten Models 2 and 3 were 16.5 meters (54 feet 2 inches) long and had a maximum speed of 40 knots.



Torpedoes

93 Shiki, Model 3 "Long Lance" torpedo



Length 9 m (29 ft. 7 in.)
 Beam 61 cm (2 ft.)
 Propulsion Oxygen-fuelled Type 93 torpedo motor
 Speed 48 knots
 Range 15,000 m (16,350 yd.) at 48 knots
 Charge 780 kg explosive

Kaiten Model 1



Length 14.3 m (48 ft. 4 in.)
 Beam 95 cm (3 ft. 1 in.)
 Propulsion 2 Type 93 torpedo motors
 Speed 30 knots
 Range 78 nautical miles at 12 knots
 Charge 1.55 tons explosive
 Crew 1

Kaiten Model 2



Length 16.5 m (54 ft. 2 in.)
 Beam 1.3 m (4 ft. 3 in.)
 Propulsion One Type 6 torpedo motor
 Speed 40 knots
 Range 83 nautical miles at 20 knots
 Charge 1.55 tons explosive
 Crew 2

torpedoes fired by the submarine USS *Hardhead*. *Natori* sank on 18 August 1944 and was taken off the Navy List on 10 October 1944.

Yura was the flagship of submarine Sentai 5 at the outbreak of World War II and proceeded to Palau with two submarine divisions. The unit was diverted and took part in the invasion of Malaya. On 8 December 1941 submarines of Sentai 5 were the first to locate British battleship HMS *Prince of Wales* and battle cruiser HMS *Repulse* of Force "Z," both of which were sunk two days later. Following the sinking of the British ships, *Yura* operated around Borneo and French Indochina and was later assigned to the Malay Force. After refitting, the light cruiser was assigned on 10 May 1942 to replace *Naka* as flagship of Destroyer Sentai 4. *Yura* was present at the Battle of Midway as part of Chujo (Vice Admiral) Kondo's force and returned without damage from this U.S. victory. Following action during the Second Solomon Sea Battle on 24 June 1942, *Yura* took part in escort duties between the Shortland Islands and Guadalcanal as the IJN tried to stop the U.S. advance in that area. On 18 October, off Choiseul Island, *Yura* was hit by a dud torpedo fired by the submarine USS *Grampus* and suffered only minor damage. The light cruiser stayed in action, but a week later, during daylight shelling of Henderson Field on Guadalcanal, she hit by two bombs dropped by SBD bombers. *Yura* retired northward but was hit again by bombs dropped by B-17 bombers from Espiritu Santo. The wrecked cruiser was finally sunk by torpedoes launched by Japanese destroyers and was removed from the Navy List on 20 November 1942. *Yura* was the first IJN light cruiser to be lost during World War II.

At the beginning of World War II, *Kinu* was flagship of Submarine Sentai 4 and participated in the invasion of Java and Malaya. Following this action the light cruiser was assigned to Sentai 16 in the Dutch Indies. Throughout 1942 and 1943, *Kinu* acted as a fast transport for supplies and Army units around Singapore, Java, and Makassar. While anchored at Makassar, she was damaged by bombs from high-flying B-24 heavy bombers and was in dry dock for repairs and the addition of anti-aircraft guns until September 1943. Between November 1943 and June 1944, *Kinu* operated again as a convoy guard and a fast transport with Sentai 16. On 27 January 1944 *Kinu's* consort, light cruiser *Kitakami*, was torpedoed off the Andaman Islands and towed by *Kinu* back to Singapore. During supply operations in the Philippines, heavy cruiser *Aoba* was torpedoed while operating with *Kinu* on October 23, 1944, and was towed to Cavite by the light cruiser. On 25 October *Kinu* landed troops on Leyte in opposition to the U.S. invasion of the Philippines, but the next day she was attacked by U.S. Navy bombers from the carrier USS *Manila Bay* and sank near Panay. Following this loss, Sentai 16 was deactivated, and *Kinu* was taken off the Navy List on 20 December 1944.

Abukuma was flagship of Destroyer Sentai 1 at the start of World War II and helped cover the fleet of Chujo (Vice Admiral) Nagumo Chuichi during the Pearl Harbor attack. Following this the light cruiser operated out of the Japanese base at Truk and took part in the invasion of Rabaul and Kavieng. She was with Sentai 8 during the U.S. carrier raids in the Marshall and Gilbert Islands and again in the Indian Ocean during April 1942. Following refitting in Japan, *Abukuma* was reassigned to divisions of Destroyer Sentai 1 and operated with the Northern Force during the invasion of the Aleutians. For this operation the light cruiser was camouflaged with patches of white over her gray base paint, and her middle funnel was painted white to alter her appearance. Along with *Kiso* and *Tama*, *Abukuma* was one of the few Japanese warships to be camouflaged. With the failure of the northern operations, *Abukuma* took part, along with *Kiso*, in the evacuation of the Japanese Garrison on Kiska Island during July 1943. She was in dry dock from 20 October to 5 November 1943 and her anti-aircraft armament was upgraded at this time.

While *Abukuma* was on a supply and raiding mission off Panaon Island in the Philippines, a torpedo launched by U.S. torpedo boat PT-137 hit and slowed the light cruiser as (► 36)



Kinu just after her launch on 10 November 1922. The seaplane launch ramp can be seen extending above semi-turret number 2. The Type 90 seaplane was stored beneath the bridge.

Kinu on a trial run during July 1922. In wartime form, these ships sat much lower in the water due to higher displacement.

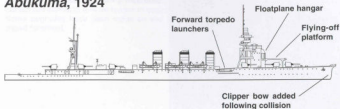


Yura steaming on trials during March 1923.

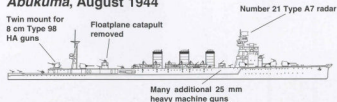
The linoleum deck covering used on Japanese cruisers can clearly be seen in this 1922 view from *Kinu's* foremast toward her stern. The linoleum was held in place by strips of brass hammered into tracks in the deck. These strips ran at right angles to the hull.



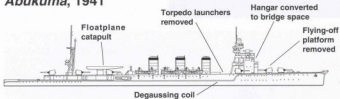
Abukuma, 1924



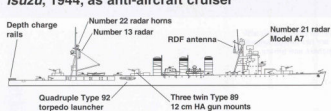
Abukuma, August 1944



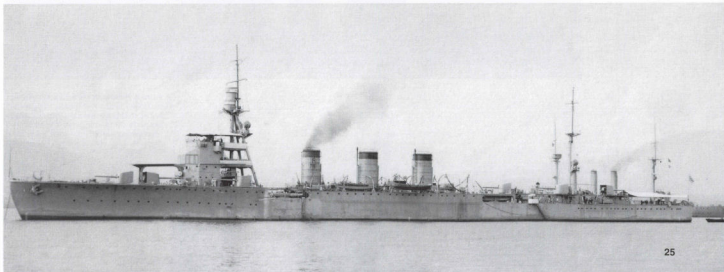
Abukuma, 1941



Isuzu, 1944, as anti-aircraft cruiser



Nagara at Sasebo during the spring of 1922. The aircraft launch rail is clearly visible.





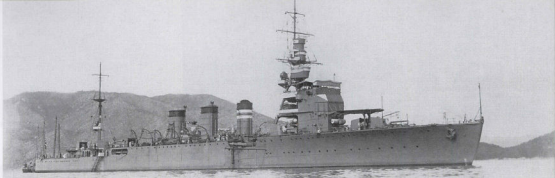
Yura during August 1923.

Natori in 1929. Clearly visible are her davits, torpedo launchers and turrets.



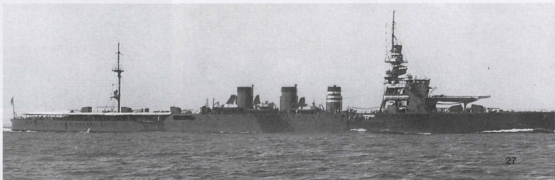
Isuzu at Yokosuka during August 1923.

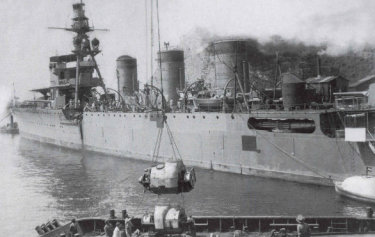
Nagara in 1930 still retains her seaplane launch rail although it is no longer in use. Some upgrades have been made on the tripod foremast.



Abukuma at Yokosuka during 1932.

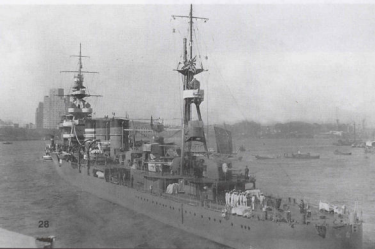
Yura on 29 July 1932. Japanese sailors stayed aboard ship more than sailors of other navies. They made extensive use of canvas covers over parts of the ship and even hung their laundry out to dry over railings and guns.





Isuzu fitting out in the Yokosuka Naval Yard on 18 May 1932. A new seaplane catapult was installed aft of the rear funnel at this time. These catapults were only marginally successful on some of the *Nagara*-class light cruisers and were generally removed during World War II.

Nagara at anchor in China during 1934. The new seaplane catapult is clearly visible with a Nakajima E4N2 Type 90-2 reconnaissance floatplane sitting at an angle due to cramped space. The seaplane derrick is hoisted against the mainmast.



Abukuma dockside in Osaka in October 1933 shows the very narrow hull and conning tower of the 5,500-ton Japanese light cruisers. The Imperial chrysanthemum on the bow is prominent.

Tama took part in the Aleutian campaign to take Kiska Island during 1942. During this initially successful campaign, *Tama*, along with the light cruisers *Kiso* and *Abukuma*, was painted in a camouflage scheme consisting of white patches painted over the standard medium gray in an attempt to break up her profile and make her appear shorter like a destroyer. The floatplane, a Nakajima E8N2 Type 95 (Allied code name 'Dave'), was soon to be phased out in favor of the newer Type 0 ('Jake').



The Nakajima E8N Type 95 Reconnaissance Seaplane (Allied code name 'Dave') first flew in 1934 and served aboard ships as a spotter and general reconnaissance aircraft until late 1942.

Yubari was flagship of a supply convoy to Saipan between 20 and 30 March 1944. She was torpedoed by the submarine U.S.S. *Bluegill* off Sonsorot Island on 27 April 1944. The light cruiser was painted in standard medium gray with red-brown below the water line.



The Aichi E13A1 Type 0 Reconnaissance Seaplane (Allied code name 'Jake') was in standard use on Japanese cruisers from late 1942 until the end of World War II.

Following massive battle damage, *Isuzu* was rebuilt as an anti-aircraft cruiser and took part in the battle off Cape Engaño, only to be later sunk during a transport run to Brunei by a torpedo fired by the submarine U.S.S. *Hake*. At the time of her loss, *Isuzu* was painted in standard medium gray with funnel tops and main mast top painted glossy black.



The Mitsubishi F1M2 Type 0 Observation Seaplane (Allied code name 'Pete') was carried on some Japanese cruisers from 1942 to 1945. These floatplanes were used in the short-range role, many times at night.

Training cruiser *Kashii* was flagship of the Number One Surface Escort Division, which protected convoys late in the war. On 12 January 1945, while on escort duty, she was sunk by U.S. bombers. *Kashii* was painted standard medium gray with gloss black funnel top and mainmast tops. Training cruisers were not armored but carried 14 cm (5.5 inch) main guns.



Imperial Japanese Navy Ensign

Yahagi led four destroyers in a daring torpedo attack on the U.S. light carriers during the Battle of the Leyte Gulf. While leading the screening force for the super battleship *Yamato* during the famous "Last Sortie" of the Imperial Japanese Navy, *Yahagi* was overwhelmed by U.S. bombers and sank on 7 April 1945. The light cruiser was painted in the standard medium gray with gloss black on the funnel and mainmast top. Two Type O "Jake" floatplanes were carried.



IJN Battle Ensign



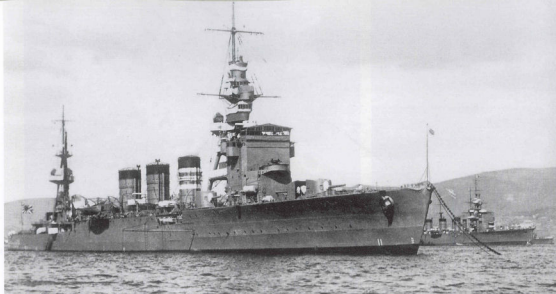
Vice Admiral's Flag

Although originally designed for action with submarine flotillas, the large light cruiser *Oyodo* was used as an IJN flagship and was initially kept out of combat. *Oyodo* later performed with valor during the battle off Cape Engaño when she took Vice Admiral Ozawa and his staff off the sinking carrier *Zuikaku*. *Oyodo* was painted in the standard medium gray with gloss black on the funnel and mainmast top.



The Imperial chrysanthemum as carried on the bows of IJN warships





Natori at anchor in 1936 with Abukuma behind. These cruisers fought in World War II in this configuration but without the white rings on the forward funnel.

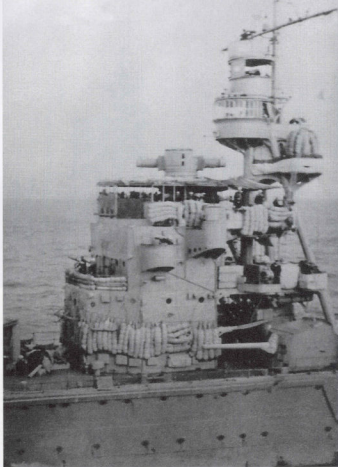
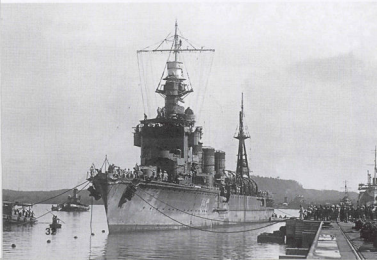
Kinu in Hiroshima Bay on 20 January 1937. The seaplane carried at this time was a Kawanishi E7K1 Navy Type 94 reconnaissance floatplane (Allied code name 'Alf').



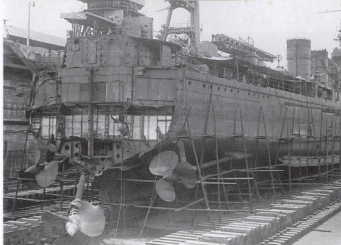


Abukuma in her final World War II configuration steams at moderate speed toward Hawaii on 7 December 1941 carrying a radial-engine version of the Type 94 'Alf' seaplane.

Natori on 3 February 1943 clearly shows range finder additions to the conning tower. These ships were heavier and rode lower in the water than earlier versions.

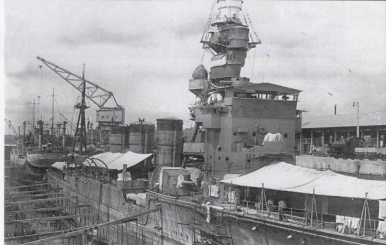


Abukuma's bridge on 7 December 1941 during the Pearl Harbor attack. Tightly rolled canvas sheets provided extra splinter protection for the crew. Modifications to the bridge during the 1937-1938 refit are clearly visible including a new main gun rangefinder atop the bridge, an upgraded anti-aircraft position below the bridge, and two round lookout and range finder platforms. An additional fire control platform was added to the rear of the mast.



Natori in dry dock at Seletar (near Singapore) on 5 February 1943 following heavy battle damage. The submarine U.S.S. *Tautog* scored two torpedo hits on 9 January 1943 which broke the stern off *Natori*.

The modified *Isuzu* running trials in Tokyo Bay on 14 September 1944 following conversion to an anti-aircraft cruiser. This light cruiser was used both as an anti-aircraft cruiser and as an anti submarine mop-up ship. *Isuzu* was flagship of Sentai 31 which provided anti-submarine protection to the fleet. A large radar "mattress" antenna has been mount-



Natori on 1 April 1943 while in dry dock at Singapore for repair. Some of her crew are still living on board, as evidenced by the drying laundry hung over the starboard rail.

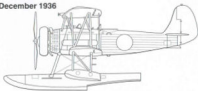
ed atop the bridge. Main armament has been upgraded to include 12.7 cm (4.7-inch) high elevation guns in standard Model A-1 emplacements. Older torpedo launchers have been replaced with Type 92 quadruple 61 cm (24-inch) torpedo mounts in the aft wells. This was the ultimate configuration of a *Nagara*-class light cruiser.



Observation Aircraft

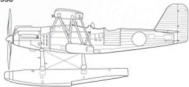
Nakajima E4N2

December 1932 – December 1936



Kawanishi E7K1 ('Alf')

December 1934 – 1938



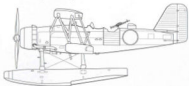
Nakajima E8N2 ('Dave')

December 1936 – Autumn 1942



Kawanishi E7K2 ('Alf')

1938 – 1943



Mitsubishi F1M2 ('Pete')

Autumn 1942 – 1945



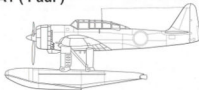
Aichi E13A1 ('Jake')

1942 – 1945



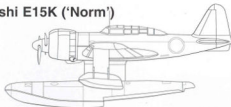
Aichi E16A1 ('Paul')

1944 – 1945



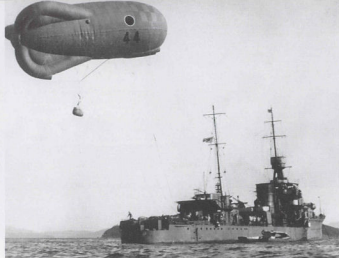
Kawanishi E15K ('Norm')

1945





The new Yubari makes 34.8 knots on a trial run on 5 July 1923. The black smoke was a characteristic of Japanese ships that made them easy to spot during World War II.



Yubari in 1925 in the days before spotter aircraft were carried on Japanese cruisers. Observation balloons were used for a short period of time.

Yura in 1937. The catapult overtops two semi-turrets. The floatplane is a Kawanishi E7K1.

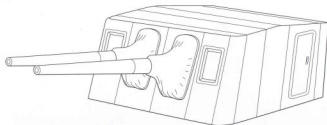




Yubari at Sasebo on 31 July 1923. Shortly after completion the funnels were very low, and stack extensions were added later.

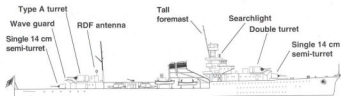
she tried to steam to Coron. While in route in the Sulu Sea, the light cruiser was attacked by high-flying B-24 bombers. *Abukuma* received two direct hits and suffered several near misses, leaving the ship on fire and almost dead in the water. When fire reached the oil tanks, the crew abandoned ship, and *Abukuma* sank on 26 October 1944. The warship was deleted from the Navy List on 20 December 1944.

Armament

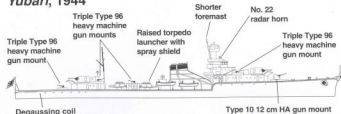


Double Type A turret for super-firing 14 cm (5.5-inch) Type 3 guns. These turrets were used on *Yubari*, *Katori*-class training cruisers, and submarine tenders *Tingei* and *Chogei*.

Yubari, 1937



Yubari, 1944



Yubari Class

The experimental light cruiser *Yubari* was designed by Chujo (Vice Admiral) Hiraga to test new concepts of saving weight in warships. Although the design displacement of *Yubari* was only 3,560 tons and all heavy armament was mounted on the centerline, the warship had the same broadside as a 5,500-ton light cruiser with no loss of speed. *Yubari* did not carry a float-plane but was heavily armed with torpedoes. In a blurring of the distinction between light cruisers and large destroyers due to changing needs and roles during the war, *Yubari* was more akin to the Dutch 3,787-ton light cruiser *Tromp*, the Italian 3,686-ton light cruiser *Capitani Romani* (both 'destroyer killers'), and the Japanese 3,430-ton large destroyer *Akizuki* (an anti-aircraft destroyer designed to protect carriers and other capital ships).

Design of all Japanese "A"-class heavy cruisers can be linked to the successful *Yubari*. However, no light cruisers were built from the *Yubari* design, as development of this type of warship languished until 1938, by which time designer Hiraga was committed to design of the super-battleships *Yamato* and *Musashi*.

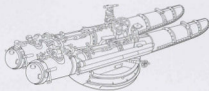
The sole example of its class, *Yubari* was laid down on 2 June 1922 and launched on 5 March 1923. The light cruiser was built by the IJN at Sasebo Naval Yard. In wartime configuration, *Yubari* was 139.4 meters (457.5 feet) long with a beam of 12.0 meters (39.5 feet) and a mean draft of 3.9 meters (12.7 feet). Her displacement was 3,560 tons while the trial displacement was 4,091 tons. Full war load increased to 4,448 tons. *Yubari* had eight Kanpon water-tube oil-fired boilers driving three sets of geared turbines producing a maximum 57,900 shaft horsepower turning three screws for a top speed of 35.5 knots. Her radius of action was 5,000 nautical miles at 14 knots. Complement was 328 officers and men.

Yubari had 57 mm (2.2-inch) side armor designed to protect machinery from 4-inch (10 cm) shell hits. The deck was armored with 25.4 mm (1-inch) steel plates. The conning tower was not armored.

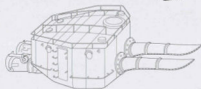
Yubari's main armament during wartime was four 14 cm (5.5-inch) main guns in two enclosed mounts, one on the foredeck and one aft. Secondary armament was one

Torpedo Launchers

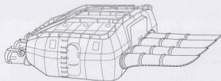
Trainable twin torpedo launcher for Type 6 53.3 cm (21-inch) torpedoes. These were originally mounted on *Kuma*-, *Nagara*-, and *Sendai*-class 5,500-ton light cruisers.



Type 6 53.3 cm (21-inch) twin torpedo tubes with spray shields as used on *Yubari*.

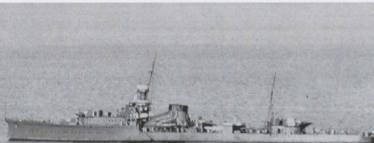


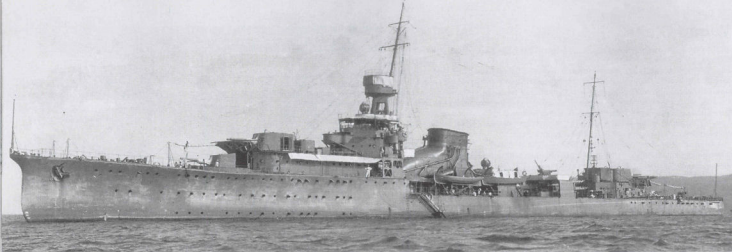
Type 92 quadruple 61 cm (24-inch) torpedo tube mount used on *Yahagi*-class light cruisers and several destroyer classes.



Light cruisers *Jintsu* and *Yubari* taking part in maneuvers during 1927. *Yubari* represented new thinking in Japanese cruiser design and construction. The successful design of

Yubari affected all heavy cruiser design, but no new light cruisers were built until the *Agano* class in 1941.

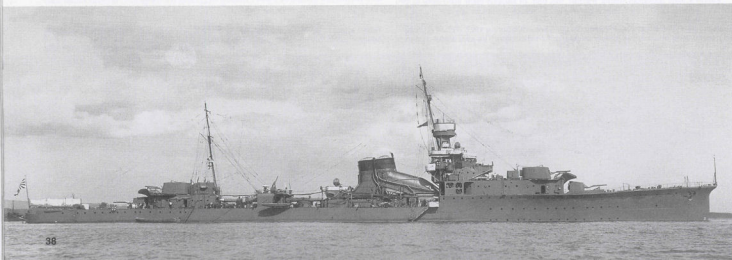




Yubari in 1924 had extended funnels.

Yubari in 1933 shows the original main gun layout and the early double torpedo launchers. This light cruiser mounted a similar armament to the larger 5,500-ton light cruisers but

could not carry a seaplane because of lack of space. During World War II this would become a problem, one which possibly led to loss of Yubari.



12 cm (4.7 inch) HA gun in a shielded "E" model mount on the foredeck. This replaced a single 14 cm gun in an enclosed mount. Up to 25 25 mm (1-inch) heavy machine guns in triple, double, and single mounts were added to *Yubari* as the war progressed. Two twin torpedo mounts were provided, and eight 61 cm (24-inch) Type 8 torpedoes were carried. In addition, provisions were made for 48 mines.

Following commissioning on 31 July 1923, *Yubari* was registered at the Sasebo Naval Station. Her home port later was changed to Yokosuka, where it remained until her loss in 1944. *Yubari* initially was assigned to Sentai 3 of the First Fleet along with the 5,500-ton light cruisers *Tama* and *Isuzu*. *Yubari* made many cruises to Chinese waters during the 1920s and 1930s and participated in actions off Shanghai and Woosung, during which she suffered structural damage from the firing of her main guns. During 1933 *Yubari* was in dry dock and underwent major modifications to her hull, torpedo launchers, and funnel height. At the start of World War II, *Yubari* was operating with light cruisers *Tenryu* and *Tatsuta* of Sentai 18, which had been ordered to take part in the seizure of Wake Island. Following the success of this effort, Sentai 18 proceeded to Truk and then participated in the taking of Rabaul, New Britain. On 8 March 1942, Sentai 18 provided cover at Kaveing, New Ireland, where *Yubari* suffered near misses from aerial bombs delivered by U.S. carrier planes from the carrier USS *Yorktown*. Damage was minor and later repaired at Truk. Following this, *Yubari* and her destroyers took part in escort duties for several supply trips to islands around Guadalcanal. On the night of 8 August 1942 the light cruiser took part in the Battle of Savo Island from which she emerged unscathed after firing at the Allied ships. *Yubari* was in dry-dock at Yokosuka, Japan from December 1942 to March 1943.

On 1 April 1943, *Yubari* was assigned to the Eighth Fleet and remained at Rabaul as a guard ship. On the night of 2-3 July 1942 the light cruiser and her destroyers shelled the U.S. invasion beach at Rendova in the Solomon Islands without accomplishing much. Then, on 5 July 1943 *Yubari*, steaming off Buin, struck a mine which caused medium damage to the hull, but the ship managed to return to Rabaul under her own power. Following repairs at Truk and Saipan, *Yubari* reached Yokosuka where she was dry-docked again until 18 October 1943. By 3 November *Yubari* was back at Rabaul, where she was lightly damaged by near misses and strafing by U.S. aircraft. Following this, she returned to Yokosuka where her anti-aircraft armament was increased and surface-search radar was added. On 9 March 1944, *Yubari* escorted an 11-ship convoy to Palau and Saipan. Then, on a troop transport mission on 27 April 1944, the light cruiser was hit by one torpedo off six fired by the submarine USS *Bluegill* off Sonsoor Island near the Palaus. The crew and escorting destroyers tried to keep *Yubari* afloat, but she finally sank on 28 April 1944. The historic light cruiser that had meant so much to the IJN was removed from the Navy List on 10 June 1944.

Sendai Class

This was the third and last group of 5,500-ton light cruisers developed from the design of the earlier and smaller *Tenryu* class. Minor improvements on the preceding *Nagara* class included a new arrangement of the boilers, resulting in a unique mix of small and large stacks. *Sendai* and sister-ships *Jintsu* and *Naka* were the only three completed out of six originally ordered, a result of the Washington Treaty signed by Japan in 1921. The characteristic tripod mainmast and a new centerline-mounted catapult on the after deck were added during refitting in 1934. In 1940, the new "Long Lance" torpedoes replaced the original 53 cm (21-inch) torpedoes. Basic design limited the armament and armor protection, so this was the last class of 5,500-ton light cruisers to be built. The (►► 45)



(Above) *Jintsu* under construction during 1924. This was the last class of Japanese 5,500-ton light cruisers to be built.



Class leader *Sendai* achieved a top speed of 36.2 knots on trials on 8 March 1924.

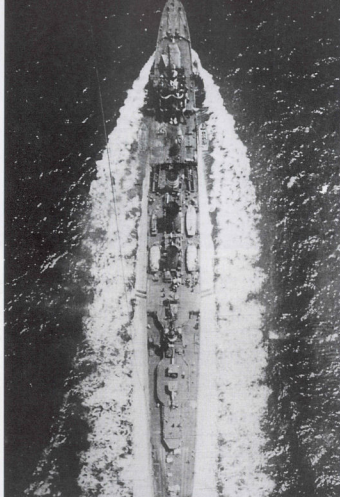
The newly completed *Naka* anchored at Yokohama on 30 November 1925.





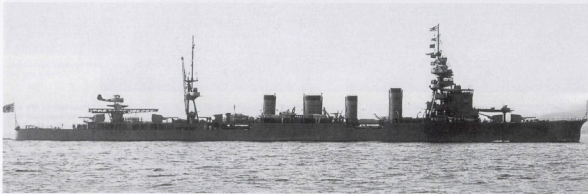
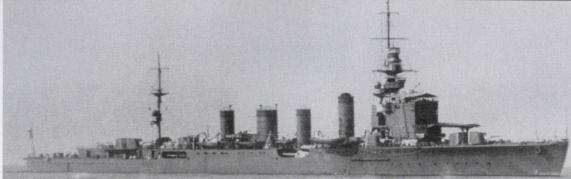
Jintsu on 2 December 1928 shows off her seaplane launching platform extending out over the number one and two semi-turrets. This system did not work properly in service and was later replaced with a catapult above the semi-turrets on the after deck.

Jintsu in 1930 with her new clipper bow added following a collision with the destroyer *Warabi* on 24 August 1927. *Warabi* sank as a result of the collision.



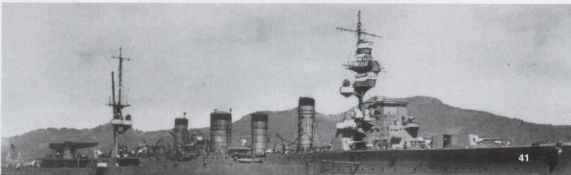
Jintsu in 1927 as seen from an observation balloon towed by the light cruiser. Such balloons were used until more reliable floatplanes and catapults were developed.

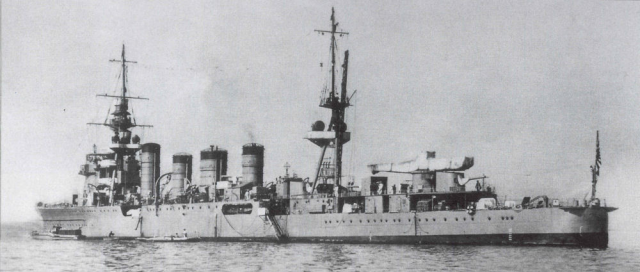
Sendai off Yokohama on 5 September 1931. This light cruiser was the only unit of the *Sendai* class to fight in World War II with her original curved bow. At this time the catapult had not been added.



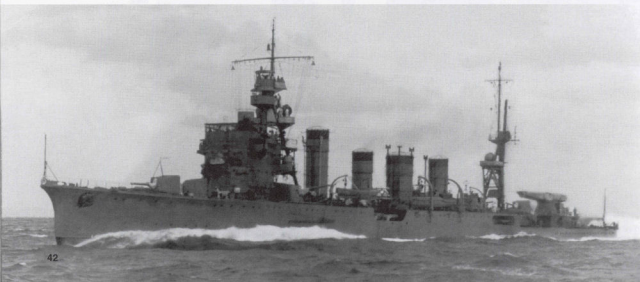
Naka shows off her new catapult, complete with a Nakajima E4N2 Type 90-2 floatplane, in this January 1934 photograph. A new derrick has been added to the mainmast for floatplane handling. The ship still retains the launching platform above the foredeck.

Sendai during November 1935 has a new catapult and the launching rail over the foredeck has been removed. The "tall-short-fat-short" progression of stacks was a key identification point for the Allies during World War II.





Jintsu in 1938 shortly before going into dry-dock for her last major update.



Fresh out of dry dock on 13 November 1939, *Jintsu* runs trials off Sato Point in Hiroshima Bay. This was her last major update prior to World War II. The new Type 93 launchers for the deadly "Long Lance" torpedoes can be seen as well as new range finders on the bridge. The mainmast has been modified and reduced in size. In final form these light cruisers sat much lower in the water than earlier in their careers.

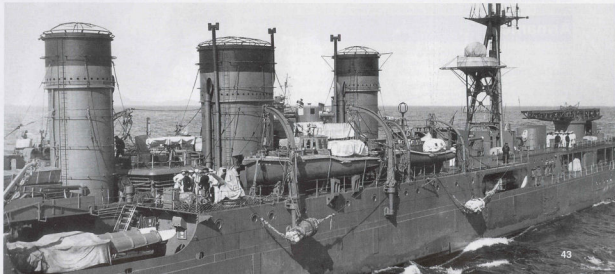


Naka at dockside on 3 May 1942. The mainmast clearly shows modifications made during her last refit.



This 1941 image of *Sendai* at anchor clearly shows the linoleum strips on the deck as well as the Kawanishi E7K2 Type 94 floatplane carried on the catapult. These floatplanes were about to be exchanged for the new Aichi E13A1 Type 0 floatplanes (Allied code name 'Jake').

This very clear photograph of *Sendai* was taken on 26 February 1939 from the destroyer *Nenohi*. On the upper deck is a 1 inch (25 mm) Type 96 heavy machine gun mount and a Type 90 RDF antenna just aft of the number 4 stack. The Kure Type 2, Model 3 catapult was installed in the 1934 refit. The destroyer *Wakaba* can be seen between number 3 and 4 stacks. Of interest is the white-painted tips of the 61 cm torpedo launchers. This was evidently done to reflect heat from the torpedo warheads immediately beneath.

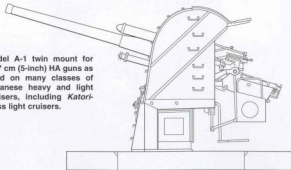




Naka seen on 22 April 1942 in World War II trim. Noticeable are the shortened foremast, rangefinders on both sides of the bridge, and the much lower position in the water due to her increased tonnage.

Armament

Model A-1 twin mount for 12.7 cm (5-inch) HA guns as used on many classes of Japanese heavy and light cruisers, including *Katori*-class light cruisers.



Naka, seen here bow-on on 22 April 1942, shows her very narrow hull as well as a list to starboard which could have been caused by loading of supplies in progress. The bow is very low in the water. The chrysanthemum on the bow is clearly visible.

Jintsu, 1932



Sendai, 1941



experimental light cruiser *Yubari*, built at the same time as the *Sendai* class, proved that much smaller and better-protected ships with the same armament and speed could be built. However, the IJN's concentration on heavy cruisers meant that no additional light cruisers would be built prior to the beginning of World War II.

Sendai-class light cruisers in wartime form were 162.2 meters (532 feet) long with a beam of 14.2 meters (46.5 feet) and a mean draft of 4.9 meters (15.9 feet). Standard displacement was 6,143.3 tons while trial displacement was 6,962.9 tons. Full war load was over 7,609 tons. The *Sendai* class had twelve Kampon three-drum, water-tube boilers driving four sets of geared turbines, which provided 90,000 shaft horsepower to four shafts with three-bladed propellers. Maximum speed was 35.25 knots, and range was 5,000 nautical miles at 14 knots. Complement was 453 officers and men with provisions for an additional flag officer along with staff of 27 officers and men.

Sendai-class side armor was designed to protect vitals against 4-inch shells then carried by U.S. destroyers. The side belt was 76.8 meters (251.9 feet) long, 4.9 meters (16.1 feet) wide and 6.4 cm (2.5 inches) thick. Deck armor was 5.0 cm (two inches) thick, and 5.0 cm thick plates also protected the conning tower. These ships proved vulnerable to 5-inch (12.7 cm) shells carried by U.S. destroyers during World War II.

The *Sendais'* main armament in wartime was seven 14 cm (5.5-inch) Type 3 main guns in single mounts, four forward and three aft. These mounts featured thin gun shrouds rather than true turrets. By the time these light cruisers were fighting in World War II, the original secondary armament had been replaced by two 12.7 cm (5-inch) guns in a double mount aft and up to 44 25 mm (1-inch) heavy machine guns in various mounts. The light cruisers carried eight "Long Lance" torpedoes and 80 offensive mines. All three ships of this class were fitted with an catapult, and each operated one seaplane throughout World War II.

All ships of the *Sendai* class were laid down between 16 February 1922 and 24 May 1924 and were launched between 30 October 1923 and 24 March 1925. They were all commissioned

by 30 November 1925. *Sendai* was constructed by Mitsubishi at Nagasaki, *Jintsu* by Kawasaki at Kobe, and *Naka* by the IJN at Yokosuka Naval dockyard.

The class leader *Sendai* and her four destroyer Sentaits sortied with transports containing the Malay Invasion Force on 26 November 1941. The transports landed army units in the Gulf of Thailand in preparation for attacking British Forces in the Malay area. *Sendai* took part in the sinking of the Dutch submarine *O-20* off Kota Bharu during the morning of 20 December 1941. Then on 26 January 1941 *Sendai* and destroyers *Shirayuki*, *Asagiri*, and *Fubuki* engaged the British destroyers HMS *Thames* and HMS *Vampire* near Singapore in a one-sided action called the Battle off Endau. In a running battle HMS *Thames* fired two torpedoes at *Sendai*, both of which missed, but the valiant British destroyer was hit by shellfire, probably from *Sendai*, and rapidly sank. HMS *Vampire* escaped to fight another day.

Sendai was stationed at Singapore following the defeat of the British. She was refitted during April and May 1942 and then took part in the Midway Operation with Destroyer Senta 3, which provided a screen for Admiral Yamamoto's main battleship force. Following the U.S. invasion of Guadalcanal, *Sendai* supported army landings on the night of 4-5 September 1942 on Guadalcanal and shelled Tulagi Island on the night of 8-9 September. *Sendai* and her destroyers were with battleship *Kirishima* when the latter was lost off Guadalcanal on 14-15 November 1942, but the light cruiser was not hit.

Throughout most of 1943 *Sendai* operated out of Rabaul on support duties until her loss on 2 November 1943. The light cruiser and destroyers were part of Shosho (Rear Admiral) Omori Sentaro's force proceeding to Empress Augusta Bay to oppose U.S. landings near Cape Torokina, Bougainville, when lookouts sighted an enemy force some 9,000 yards distant. *Sendai* turned to starboard and launched four torpedoes but was immediately hit by shellfire from four light cruisers under the command of Rear Admiral Aaron S. Merrill. Very accurate radar-controlled fire struck *Sendai*'s engine room shutting down power, after which rapid flooding caused her to sink. The light cruiser was removed from the Navy List on 5 January 1944, the first of this class to be lost.

Naka was flagship of Destroyer Senta 4 which took part in early operations in the Philippines during December 1941. During landings on Luzon, the light cruiser was strafed by P-40E fighters of the U.S. Army Air Corps. The strafing left holes in *Naka*'s hull from .50-caliber (12 mm) hits, showing how vulnerable these ships were. During January 1942, as the light cruiser escorted an invasion force headed for Balikpapan in the Dutch East Indies, Dutch submarine *K-XVIII* launched torpedoes at her but missed. While Senta 4 hunted for the submarine, four U.S. destroyers sank three transports and a patrol boat before being chased away by *Naka* and her destroyers. Following this action, *Naka* helped escort an invasion force to the Lingayen Gulf in eastern Java where she and her sister-ship *Jintsu* were involved in the Battle of the Java Sea, in which both cruisers launched torpedoes but were not hit themselves. Then, during operations on 1 April 1942 while she was supporting the invasion of Christmas Island, *Naka* was struck by a torpedo fired by the submarine USS *Sennow*. This hit opened a hole three meters in diameter in the starboard side of the cruiser, but rapid action by the crew kept her afloat. She was taken under tow by the light cruiser *Natori* and finally reached Singapore under her own power. Following temporary repairs at Selat Naval Base, *Naka* proceeded to Yokosuka where she was laid up a full year until 5 April 1943. *Naka*'s place as flagship Senta 4 was taken over by the light cruiser *Yura*.

On 1 April 1943 *Naka* was assigned to Senta 14 with the Fourth Fleet and left for Truk following her overhaul. From her base at Truk, *Naka* made transport runs to nearby islands and the garrison at Rabaul. On 17 February 1944, she left Truk to (► 46)

assist the disabled light cruiser *Agano* and soon came under aerial attack by aircraft of U.S. Task Force 58. *Naka* survived the first two attack waves but sustained a torpedo hit on the starboard side compounded by a bomb strike near the bridge. The light cruiser broke in half and sank in flames caused by leaking fuel oil. *Naka* was removed from the Navy List on 31 March 1944.

Jintsu started World War II as the flagship of destroyer Sentai 2 under the command of capable Shosho (Rear Admiral) Tanaka Raizo. Sentai 2 launched an attack on Davao in the Philippines from bases in the Palau Islands on 6 December 1941. Later the light cruiser supported landings in the capture of Davao. Following the successful occupation of the Philippines, *Jintsu* and her destroyers were part of the Dutch Indies Invasion Force. *Jintsu* and Sentai 2 supported troop landings in the Celebes, Hong Kong, Ambon, and Timor. During the Battle of the Java Sea, the British destroyer HMS *Electra* hit *Jintsu* with a 4.7-inch (12 cm) shell which did little damage but sent her to dry dock in Kure. Following repairs, *Jintsu* and ten destroyers of Sentai 2 provided escort for transports carrying the Midway invasion force, but after carrier losses in that battle the operation was cancelled.

Training cruiser *Katori* at Yokohama, just after completion in April 1940. These ships were not considered true cruisers by the IJN and were named after famous homeland shrines. They were,

Following U.S. landings on Guadalcanal, Sentai 2 was ordered to Truk to get ready for the coming battles. On the night of 18-19 August 1942, Japanese destroyers landed troops on Guadalcanal while *Jintsu* and other destroyers escorted several transports loaded with troops that were to land on the contested island. While the convoy was still 150 miles from Guadalcanal, U.S. Dauntless dive bombers attacked, sunk one transport, and hit *Jintsu* with a 500-pound bomb on the foredeck. *Jintsu* lost 24 crewmen and could only make 12 knots back to Truk, where temporary repairs were made. Shosho Tanaka transferred his flag to the light cruiser *Isuzu* while *Jintsu* made its way back to Kure for permanent repairs. She eventually rejoined Sentai 2 as flagship on 16 January 1943 at Truk.

On 8 July 1943, *Jintsu* left Truk with destroyers loaded with army troops to be landed on Kolombangara Island. On 12 July, a floatplane radioed sightings of U.S. cruisers which were spotted shortly thereafter by the Japanese ships. *Jintsu* opened fire and tried to maneuver but started to receive very accurate radar-controlled gunfire from the light cruisers USS *Honolulu*, USS *St. Louis*, and HMNZS *Leander*, during what is known as the Battle off Kolombangara. *Jintsu* was pounded by at least ten 6-inch shells, and a torpedo hit finished her off. The light cruiser was removed from the Navy List on 10 September 1943. (►► 48)

however, considered cruisers by the Allies during World War II, probably due to their main armament of four 14 cm (5.5-inch) guns and the fact that they found their way into combat.





Kashima off Shanghai on training cruise in August 1940.

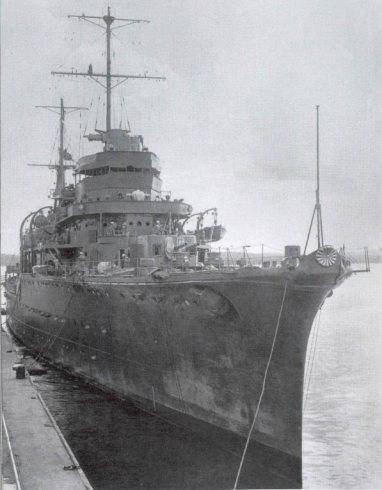
This port beam view of *Kashii* dates from 15 July 1941. These small training cruisers were about the size of *Yubari* but with a top speed of only 18 knots. *Kashii*, unlike her two sister



Kashima off the Japanese bastion at Truk Atoll during 1941. The Model A-2 turrets are the same as used on *Yubari*.

ships, was built from the start as a fleet flagship and served in this capacity at Singapore.





Kashii at Seletar (near Singapore) on 17 April 1943 in her role of fleet flagship. By 1944, the foremast was much shorter with only one spar. The Model A-2 turret is clearly visible on the foredeck.

Katori Class

In the mid-to-late 1930s, with war seeming certain, the need for training an increasing number of seamen for the Imperial Japanese Navy became apparent. Obsolete protected cruisers of 1890-vintage were being used to train cadets, and there were plans to convert some of the 5,500-ton light cruisers into training ships. However, there were more missions for these warships than there were cruisers to carry them out. Some served as flagships for destroyer and submarine sentais, some were torpedo cruisers, some were anti-aircraft cruisers, and later, some were *Kaiten* ("Heaven Shaker") torpedo carriers. To make matters worse, the old protected cruiser *Asama* ran aground and was severely damaged in October 1935.

The *Katori*-class training cruisers were not designed for combat and were in the same "J" class as special service vessels such as repair ships, submarine depot ships, fast oil tankers, and transports. Even though the *Katori*-class ships lacked the speed, strength and armament of real "cruisers," the Allied powers considered them light cruisers. As "J"-class ships they were named for famous homeland shrines. During wartime, the three ships, *Katori*, *Kashima*, and *Kashii*, were used as flagships and later in the escort or anti-submarine role due to the shortage of warships. The fourth ship of this class, *Kashiwara*, was cancelled. The ships were laid down between 24 August 1938 and 23 August 1941 by Mitsubishi at Yokohama and were commissioned between 20 April 1940 and 15 July 1941. They were registered at the Yokosuka Naval Station and were assigned to the Training Squadron.

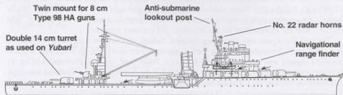
In wartime form, *Katori*-class training cruisers were 133.4 meters (437.8 feet) long with a beam of 16.6 meters (54.4 feet) and a mean draft of 5.7 meters (18.7 feet). Their trial displacement was 6,352 tons, with a full war load of 6,753 tons. *Katori*-class training cruisers had Kampon water-tube boilers with reheaters driving two sets of turbines generating 8,000 shaft horsepower and turning two shafts with three-bladed propellers. Top speed was only 18 knots. Radius of action was 9,900 nautical miles at full load. Complement was 315 officers and men with a further 275 midshipmen in the training role.

Katori-class training cruisers were not armored but had strongly built hulls.

Katori-class main armament was four 14 cm (5.5-inch) Type 3 guns in two twin turrets, one on the foredeck with the second on the afterdeck. These guns and turrets were identical to those mounted on the light cruiser *Yubari*. Secondary armament was six 12.7 cm (5-inch) dual-purpose guns in three twin mounts. Up to 30 25 mm (1-inch) Type 96 heavy machine guns in single and double mounts were carried in final form. The training cruisers had two Type 6 twin tubes, later removed, for the 53 cm (21-inch) torpedoes. Four torpedoes were carried. One catapult was fitted, and one seaplane was carried.

Katori and *Kashima* made one training cruise prior to World War II, from 7 August to 28 September 1940. The training squadron was deactivated, and on 15 November 1940 *Katori* became flagship of Submarine Sentai 1, making only one cruise in this capacity in southern Chinese waters. On 1 May 1941 *Katori* became the flagship of the Sixth Fleet submarine force. She was at Kwajalein in this capacity on 1 February 1942, when she was attacked by TBD Devastator torpedo bombers from the carrier USS *Enterprise* and damaged by near misses. *Katori* was sent to Yokosuka for repairs, after which she reported to the naval base at Truk, and then went back to Sixth Fleet duties at Kwajalein. She was back at Truk from May 1943 to February 1944. On 15 February *Katori* was assigned to the General Escort Command and was flagship of a convoy that was headed to Japanese waters. While en route, the training cruiser was torpedoed by U.S. aircraft on 17 February 1944 but remained afloat. Her crew managed to restart her engines, and *Katori* was underway when attacked by heavy cruisers USS *Minneapolis*, USS *New Orleans*, and destroyers USS *Radford* and USS *Burns*. Hit by 8-inch

Kashii, 1944 (in antisubmarine role)



shells and torpedoes, *Katori* had no chance and sank. She was removed from the Navy List on 31 March 1944.

Kashima became flagship of the Fourth Fleet on 1 December 1941 after which she left Truk and helped cover landings at Rabaul and Kavieng. On 1 May she was part of the Port Moresby seizure operation, but following its cancellation she ended up back at Truk. *Kashima* was then assigned as training ship at Kure from December 1943 to January 1945. She was used as a training ship for Etajima, the IJN naval academy, and made cruises in the western Inland Sea. Following this, she was assigned to the General Escort Command and made emergency transport runs to Okinawa and Taiwan. Then the IJN, which never seemed to know what to do with these ships, had *Kashima* modified as an antisubmarine ship between December 1944 and February 1945. She performed escort duties between Japan and Korea and was at Nansha when the war ended. *Kashima* surrendered intact at Kure, was taken off the Navy List on 4 October 1945, and then was used as a repatriation transport until November 1946. *Kashima* was broken up and ceased to exist by June 1947 — one of the last warships of the once-proud IJN.

Kashii was registered at the Sasebo Naval District and assigned as flagship of the South Expeditionary Fleet. She was assigned as guard-ship at Saigon, where she was at the beginning of World War II. *Kashii* performed escort duties in the Thailand area and stayed at Bangkok until 1 February 1942. Following this assignment she escorted transports from Singapore to Rangoon on 7 April 1942. *Kashii* was a guard ship at Seletar Naval Base near Singapore until 26 December 1943, at which time she transferred back to Japanese home waters. The training cruiser was then assigned to Etajima Naval Academy and made training cruises until modified for anti-submarine duties. Following these alterations, on 3 May 1944 *Kashii* was assigned as flagship of the No.1 Surface Escort Division, which was responsible for protection of convoys between the homeland and Singapore, a round trip usually taking one month. *Kashii* was escorting such a convoy from Singapore when it was attacked on 12 January 1945 near Qui Nhon Bay by U.S. carrier bombers. *Kashii* was hit by two bombs and a torpedo that pierced the magazine causing a large explosion. The training cruiser sank quickly by the stern. *Kashii* was removed from the Navy List on 20 March 1945.

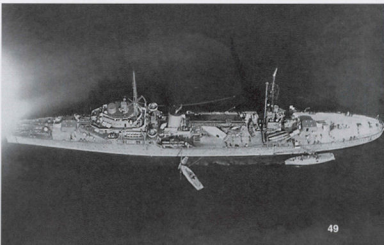
Agano Class

Japanese light cruiser development had suffered following the experimental light cruiser *Yubari*, the design and construction of which helped solidify the design of subsequent heavy cruisers. The 5,500-ton designs were modernized as much as possible but were lightly armed and armored. In the late 1930s naval designer Fukuda developed a new hull and designs for a series of light cruisers to be destroyer sentai leaders. For this role, they had to be small and fast, possess heavy torpedo armament, and carry spotter seaplanes. At first glance, the (►► 50)



Kashii dockside at Seletar in 1943. What appears to be a Kawanishi E7K2 Type 94 floatplane sits atop the catapult. Most of these aircraft were phased out by 1942, but a few survived into 1943.

This aerial view of the *Kashima* dates from 1941. These small training cruisers had turrets, torpedo launchers, and a catapult at the expense of speed because of limited space for additional boilers.





The new *Agano* training at Truk on 7 December 1942. The chains on both sides of the bow are for towing minesweeping paravanes. Wind baffles can be seen beneath the compass bridge. At this point the light cruiser carried a Mitsubishi F1M2 Type 0 spotter floatplane (code name "Pete") ahead of the catapult and an Aichi E13A1 Type 0 reconnaissance floatplane on the catapult. Later two of the Aichi Type 0 floatplanes were carried.

Yahagi leaving the Sasebo military harbor on 19 December 1943 just prior to commissioning. The catapult is a Model 5 Kure type rather than the Model 11 used on sister-ships

Agano-class cruisers seem small and lightly armed when compared to U.S. light cruisers of the *Atlanta* class which were 608 feet (185.3 meters) long and had a full war load displacement of 12,207 tons, but the U.S. Navy, unlike the IJN, did not use light cruisers as destroyer flotilla leaders. *Agano*-class light cruisers carried a very heavy torpedo armament, whereas U.S. light cruisers, with the exception of the *Atlanta* class, did not carry torpedoes.

The lead ship *Agano* and sister-ships *Noshiro*, *Yahagi*, and *Sakawa* were laid down from 18 June 1940 to 21 November 1942 but were constructed very slowly due to competing wartime priorities. *Agano* was built by the IJN at Sasebo Navy Yard and was commissioned on 31 October 1942. *Noshiro* was constructed by the IJN at the Yokosuka Navy Yard and was commissioned on 30 June 1943. *Yahagi* and *Sakawa* were both built by the IJN at the Sasebo Navy Yard and were commissioned on 29 December 1943 and 30 November 1944 respectively.

A design for a class of "improved *Agano*" light cruisers, which included heavier gun and torpedo armament, was considered but never built due to the progress of the war.

In wartime configuration, *Agano*-class light cruisers were 174.50 meters (572.4 feet) in length with a beam of 15.2 meters (49.9 feet) and a mean draft of 5.7 meters (18.7 feet). Trial displacement was 7,895 tons. Full war load for the *Agano* was 8,534 tons, slightly less for her sisters. *Agano*-class cruisers had six Kampon boilers with super-heaters and four sets of impulse geared turbines. Available 100,000 shaft horsepower drove four screws providing a maximum speed of 35 knots. Planned radius of action was 6,000 nautical miles at 18 knots. Complement was 805 officers and men.

Agano-class armor was a side belt of 60 mm (2.34-inch) steel extending beyond machinery spaces. Deck and conning tower were armored with 16-40 mm (.62-1.56-inch) steel plates.

Agano-class main armament in wartime was six 15.5 cm (6-inch) Type 41 guns in three double turrets, two on the foredeck and one aft. Secondary armament consisted of four 8 cm (3-inch) Type 98 HA guns in two "A"-model twin mounts. Also carried were as many as 61 25 mm (1-inch) Type

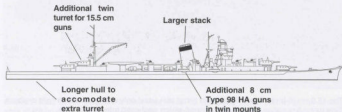
Agano and *Noshiro*. *Yahagi*'s Type 94 HA directors were further forward than those on the two sister-ships.



Yahagi, 1945



Basic Design, Improved Agano Class



The new light cruiser *Noshiro* making 35 knots while on trials off Tokyo Bay during late June 1943. The dark object on the Model 11 catapult is a mass equal in weight and location



96 heavy machine guns in triple and single mounts. The *Agano* class was designed to carry 16 "Long Lance" torpedoes; launchers were two quadruple, trainable Type 92 mounts. Provision was made for 106 depth charges. Two Aichi E13A scout seaplanes were carried, one on the centerline catapult and another on a platform above the torpedo mounts.

Agano was registered and prepared for war at Kure. She replaced the 5,500-ton light cruiser *Nagara* as flagship of the Destroyer Sentai 10, which immediately left the homeland for the bastion at Truk Atoll. *Agano* took part in the Wewak invasion during which the light cruiser *Tenryu* was sunk by a U.S. submarine. Following the withdrawal from Guadalcanal, *Agano* was involved in transport and supply missions. On 30 October 1943, the light cruiser took part in the Battle of Empress Augusta Bay, receiving no battle damage. *Agano* was not effective in this battle, however, because U.S. cruisers, with their radar-controlled gunfire, could keep the Japanese cruisers at bay preventing accurate deployment of their "Long Lance" torpedoes. In fact some IJN cruisers were later lost to torpedo explosions triggered by radar-controlled shell hits from U.S. cruisers.

On 5 November 1943, Japanese cruisers were attacked in Rabaul Harbor by U.S. naval aircraft, and *Agano* and the new *Noshiro* were strafed, the former being slightly damaged by a near miss. Following this action, both cruisers left Rabaul Harbor to try to intercept the U.S. fleet off Cape Torokina, but this effort was too late and was called off. Upon returning to Rabaul, which had now become a death trap for the IJN, *Agano* was torpedoed outside the harbor by a TBM bomber. The explosion sheared off the stern, but quick action by the crew saved the ship, and following emergency repair at Rabaul she left for Truk. On 12 November 1943, submarine USS *Scamp* torpedoed the limping *Agano*, leaving her dead in the water. *Noshiro* and, later, *Nagara* towed the stricken *Agano* to Truk where repair work started immediately. Meanwhile *Noshiro* took part in transport and escort duties from Truk to Kavieng where she and *Oyodo* were attacked by U.S. bombers. *Noshiro* was hit forward by one bomb and suffered near (► 52)

to a seaplane. The Type 94 high altitude director and rangefinder is just aft of the stack. The shape of the Type 94 main gun director atop the bridge is different from that of the *Agano*.



Yahagi awaits combat in Lingga Bay with other units of the IJN during October 1944. The two Aichi E13A1 Type 0 ("Jake") floatplanes on the centerline are visible.

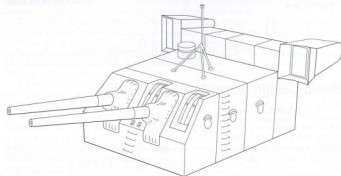
misses near the bow. Her number 2 turret was put out of action, and her hull was damaged below the waterline. **Noshiro** made her way to Truk for quick repairs, then escorted the damaged carrier **Unyo** to Saipan and returned to Yokosuka for major repairs and refit. **Noshiro** went to Lingga Roads near Singapore for training following completion of repairs at Yokosuka.

After completion of her repairs, **Agano** sortied from Truk on 15 February 1944 for Japan, but north of Truk she was torpedoed by the submarine USS **Skate**. Two hits sealed the fate of the burning light cruiser, which sank on 17 February. **Agano** was removed from the Navy List on 31 March 1944.

Yahagi was commissioned at Sasebo Naval Yard where she was also registered. This new light cruiser was immediately assigned as flagship for Destroyer Sentai 10 of the Third Fleet, replacing the sunken **Agano**. Because Truk and Rabaul were no longer safe, **Yahagi**

Sakawa at Sasebo on 24 November 1944 just before commissioning. When completed this light cruiser mounted a very heavy anti-aircraft armament which had been found necessary by this time late in World War II. Because of lack of fuel **Sakawa** spent time in the

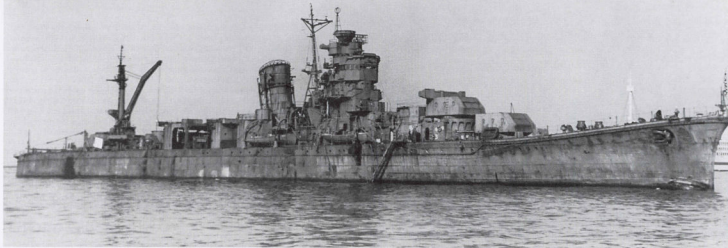
Armament



The 15.5 cm (6-inch) Type 41 twin gun turret was used only on **Agano**-class light cruisers. This turret has range finders and a tripod which anchored intercom cables.

Inland Sea training with new destroyers. In July 1945 she was transferred to Maizuru Naval Yard, where she was surrendered intact at the end of World War II.





Sakawa, with all her armament removed, about to be towed to the atomic bomb testing area at Bikini Atoll on 20 February 1946. The light cruiser was anchored at a range of 500

meters from ground zero of the "Able" atomic bomb test which occurred 1 July 1946. After receiving severe stern damage, **Sakawa** sank the following day.

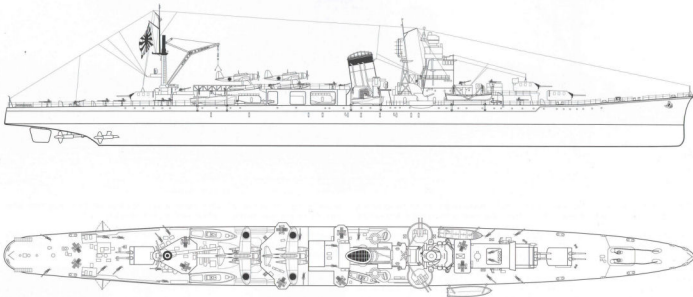
was ordered to Singapore, where she trained with **Noshiro** while awaiting the inevitable action in the Philippines. Both light cruisers and their destroyers joined the First Mobile Fleet and participated in the Battle of the Philippine Sea, **Noshiro** with Vice Admiral Kurita's force of battleships and heavy cruisers, and **Yahagi** with Vice Admiral Ozawa's carriers. Following the pivotal sea battle, both light cruisers retired to the Inland Sea. Both were then assigned to Kurita's First Raiding Force, which engaged U.S. light carriers off Samar during the Battle of the Leyte Gulf. **Yahagi** led four destroyers in a daring torpedo attack on the U.S. light carriers and succeeded in launching torpedoes at the enemy but took a 5-inch shell fired by the destroyer USS *Johnston* which damaged the officer's stateroom. The light cruiser was further damaged by near misses on the retreat from the Leyte area.

Noshiro, with seven Sentai 2 destroyers, opened fire on U.S. escort carriers but was hit on the starboard side by a 5-inch shell fired by a U.S. destroyer that did little damage. Later, the light cruiser suffered several near misses near the stern which ruptured the outer plating of the hull. Slowed by the damage, **Noshiro** was attacked by aircraft while retreating to Brunei Bay. The agile ship evaded six aerial torpedoes, but one caught her amidships, flooding her engine rooms and bringing her to a standstill. While dead in the water the hapless light cruiser was attacked again and hit with an aerial torpedo which flooded the bow, dooming the ship. **Noshiro** was removed from the Navy List on 20 December 1944.

Yahagi reached Brunei where she was assigned as flagship of Destroyer Sentai 2, replacing **Noshiro**. She escorted units of the First Raiding Force, but on the way back to the Inland Sea, battle cruiser **Kongo** was lost to the submarine USS *Sealion*. While refitting at Sasebo, Japan, Taisa (Captain) Hara Tameichi, famous for his destroyer exploits, became the last commanding officer of **Yahagi**. **Yahagi** and Sentai 2, along with the (► 55)

Yahagi under attack by an overwhelming number of U.S. aircraft on 7 April 1945 during the famous "Last Sortie" of the Imperial Japanese Navy. The super battleship **Yamato** was also sunk during this mission.





Agano-Class Light Cruiser *Yahagi*, 1945

Length:174.5 meters (572.4 ft)	Armament:6 x 15.5 cm (6-in) guns in three double turrets
Beam:15.2 meters (49.9 ft)	4 x 8 cm (3-in) HA guns in two twin mounts
Draft:5.7 meters (18.7 ft)	61 x 25 mm (1-in) heavy machine guns in triple and single mounts
Displacement:7,895 tons trial	8 x 61 cm (24-in) torpedo tubes in two quadruple mounts
8,534 tons full war load	(16 torpedoes carried)
Propulsion:100,000 shp/four screws	Provision for 106 depth charges
Speed:35 knots	Aircraft:2 Aichi E13A Navy Type 0 scout floatplanes
Complement:805 officers and men	

super-battleship *Yamato*, were ordered on a one-way attack on the U.S. fleet anchored off Okinawa, but on 7 April 1945 the small fleet was spotted and attacked by waves of U.S. carrier aircraft while many miles from the Okinawa shoreline. *Yahagi* was hit on the starboard side near the engine rooms by a torpedo launched from a TBM bomber. Immediate flooding brought the ship to a halt, after which a bomb and two more aerial torpedoes hit the light cruiser. During the second attack wave the stricken ship was hit by several more bombs and torpedoes, sealing her fate. A total of at least seven torpedoes and twelve bombs hit *Yahagi* during her last mission. The light cruiser was removed from the Navy List on 20 June 1945. Taisa Hara survived the sinking of *Yahagi* to later serve in the postwar Japanese Self Defense Force.

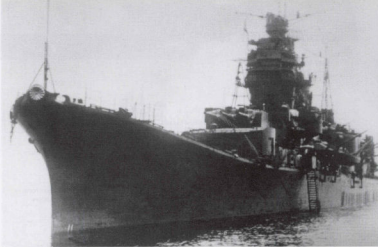
The last *Yahagi*-class light cruiser was *Sakawa*, commissioned at Sasebo on 30 November 1944. *Sakawa* took the place of the sunken light cruiser *Tama* as flagship of Destroyer Sentai 11. Lack of fuel prevented this light cruiser from joining the ill-fated "last mission of the IJN" that saw her sister *Yahagi* and super-battleship *Yamato* sunk. *Sakawa* was surrendered intact on 15 August 1945 and removed from the Navy List on 5 October 1945. She subsequently was disarmed and assigned to the Repatriation Service as a special transport. Eventually handed over to the U.S. Navy, she was towed with the once mighty battleship *Nagato* to Bikini Atoll and expended in the nuclear bomb tests on 1 July 1946.

Oyodo Class

Japanese naval doctrine called for cruisers to serve as flagships for destroyer sentais (squadrons) as well as submarine sentais. This doctrine had its beginnings in World War I and was also found in contemporary British naval organization. In contrast, U.S. naval strategy called for senior officers to command destroyer flotillas from flagship destroyers and for submarines to operate either singly or in wolf packs with loose command structures like those of the German Kriegsmarine. Some of the Japanese 5,500-ton light cruisers operated as flagships for submarine sentais, and plans were started in 1938 to design replacements for the older warships. However, the concept of cruiser as submarine flagship had not been well thought out, and consequently several radically different replacement designs were studied. One was for a 6,600-ton ship with no heavy guns and a large catapult on the afterdeck. Another was for a 16,000-ton aircraft carrier that looked much like the light carrier *Ryūjō*. However, the final "C-class" design which emerged in October 1938 was a large light cruiser of about 10,000 tons displacement, similar to that of the USS *Brooklyn*-class light cruisers, and similar in appearance to the *Agano* class, with a floatplane catapult on the after deck and a large aircraft hangar. When *Oyodo* was finally completed in February 1943, the war situation had shown the IJN submarine strategy to be flawed, and most of the remaining submarines were turned into transports to supply island garrisons. To further complicate matters, the new Kawanishi E15K1 Shiden ("violet cloud;" allied code name 'Norm') floatplanes especially designed to operate from the ship were not ready, so *Oyodo* with its large aircraft hangar became a Rengo Kantai (Combined Fleet) flagship. The hangar was modified to house fleet staff officers and communication equipment, and the catapult was reduced in size. In a radical departure from other Japanese cruiser designs, *Oyodo* carried no torpedo armament.

Oyodo was laid down on 14 February 1941 and launched on 2 April 1942 at the Kure Naval Yard. Sister-ship *Niyodo* was authorized but never laid down due to changing fortunes of war that caused her cancellation. *Oyodo* was registered at the Yokosuka Naval Station until her loss late in the war.

In wartime configuration, *Oyodo* was 192.0 meters (630.0 feet) in length with a beam of 16.6 meters (54.4 feet) and a mean draft of 6.1 meters (19.6 feet). Design displacement of *Oyodo* was 9,980 tons, while trial displacement was 10,417 tons. Full war load was over



Oyodo at anchor in 1944. Two of the triple 15.5 cm (6-inch) turrets removed from the *Mogami* class cruisers during their conversion to heavy cruisers were, in turn, mounted on *Oyodo*.

11,433 tons. *Oyodo* had six Kampon three-drum, water-tube boilers with re-heaters driving four sets of geared turbines. Turning four screws, the 110,430 available shaft horsepower provided a top speed of 35 knots. Planned radius of action was an exceptionally efficient 10,315 nautical miles at 18 knots. Complement was normally 776 officers and men, more when operating as a floating command post for naval staff.

Oyodo carried a belt of vertical 60 mm (2.34-inch) armor that covered machinery spaces. A unique forward box inside the hull was protected by tapered and sloped steel belts varying between 30 and 75 mm (2.1 and 2.9 inches). Deck armor was 30 mm (2.1-inch) steel plates, and the magazines had 50 mm (1.95-inch) steel plate protection. The conning tower had 40 mm (1.6-inch) steel plate protection. There were no hull blisters. *Oyodo* was fairly well protected when compared to allied light cruisers.

Oyodo's main armament in wartime was six 15.5 cm (6-inch) Type 3 main guns in two triple turrets on the foredeck. These guns and triple turrets had been removed from the *Mogami*-class cruisers when they received 8-inch guns. Secondary armament was eight 10 cm (3.9-inch) Type 98 rapid-fire HA guns in four double mounts placed two to a side. Other armament consisted of up to 52 of the standard 25 mm (1-inch) heavy machine guns in single and triple mounts. No torpedoes were carried, but storage was provided for depth charges. One large catapult was planned for six reconnaissance seaplanes, but in actual service two Navy Type 0 floatplanes were carried operationally.

By the time *Oyodo* was ready for combat, Japanese forces had retreated from Guadalcanal and were on the defensive in the face of large numbers of new allied warships. At first, the large light cruiser was to provide protection for carriers with her fast-firing 10 cm (3.9 inch) anti-aircraft guns as well as scouting capability with her three-seat Navy Type 0 seaplanes. For seven months *Oyodo* remained in readiness at Kure until she went to Eniwetok. (► 56)

Oyodo as built, 1942

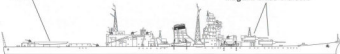
Very long (44 m/144 ft)
Type 2 Model 10 catapult



Oyodo, July 1944

Kure Type 2 Model 5 catapult

Triple turrets taken from Mogami-class cruisers



Oyodo at Kure during late June 1943. The special 44-meter Model 10 catapult visible here was removed when *Oyodo* was converted to the Combined Fleet flagship in March 1944. The range finder tower seems to be white, a symbol of ships attached to the Rengo Kantai (Combined Fleet). The A4 radar antenna was attached on the front of the range finder

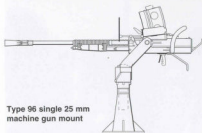
Atoll with the Rengo Kantai (Combined Fleet). The light cruiser helped carry reinforcement troops to Kavieng, New Ireland, between 30 December and 1 January 1944. The force was attacked by U.S. aircraft, and *Oyodo* suffered machine gun hits to the hull. Following this mission, the light cruiser stayed in Truk until recalled to Japan for conversion to a headquarters ship. *Oyodo* sortied with Chujo (Vice Admiral) Ozawa's main body and participated in the Battle of Cape Engaño. During that action she took Ozawa and part of the crew off of the damaged *Zuikaku* before the fleet carrier sank. *Oyodo* was hit by rockets fired by a Grumman F6F and later suffered a near miss which damaged some hull plating.

After the Battle of Leyte Gulf, *Oyodo* ceased to be flagship of the Combined Fleet. The light cruiser was in Brunei and Singapore for several weeks and then joined the heavy cruiser *Ashigara* to bombard the San Jose beachhead in the Philippines. During this action, B-25 bombers of the 71st Bomb Squadron, 5th Air Force, hit *Oyodo* with two 550-pound (250 kg) bombs. The light cruiser was repaired at Singapore in January 1945. On 6 February 1945, *Oyodo* and battleships *Ise* and *Hyuga*, along with destroyers, left Singapore with loads of rubber, aviation gasoline, tin, and other metals bound for Japan. In spite of several submarine attacks, the ships safely made Kure Harbor on 20 February 1945. On 19 March 1945 *Oyodo* suffered major damage from bomb hits while anchored in Kure Harbor, after which she was pumped out and put in dry dock at Kure. Following repair, she moored in Etajima Bay in readiness for battle, but was attacked and struck by five 550-pound (250 kg) bombs and suffered several near misses near the bow. Additional bomb hits on 28 July 1945 caused the light cruiser to capsize to starboard. *Oyodo*, the only ship in her class, was removed from the Navy List on 20 November 1945 and broken up during 1947.

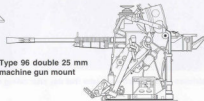
tower. The new Kawanishi E15 K Shiun ('Violet Cloud') floatplane was intended for the *Oyodo* but many bugs kept the new aircraft (Allied code name 'Norm') largely out of combat. The crew has hung the washing on the bow railing for drying.



Anti-aircraft Armament

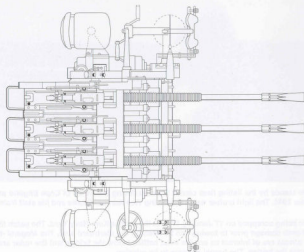


Type 96 single 25 mm
machine gun mount

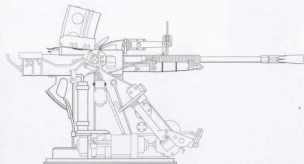


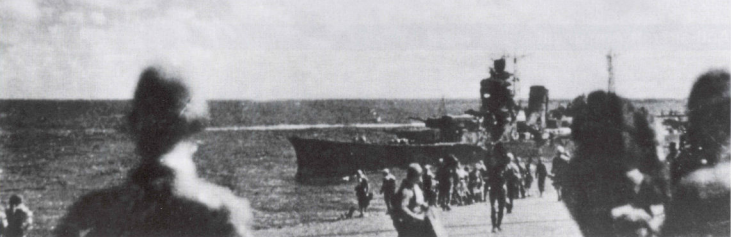
Type 96 double 25 mm
machine gun mount

A gun crew trains on one of the four 25 mm (1-inch) triple heavy machine gun mounts atop Oyodo's hangar/staff headquarters during the fall of 1944. The rear of the funnel can be seen to the right with the top of the RDF antenna visible near the center of the photograph.



Type 96 triple 25 mm
machine gun mount

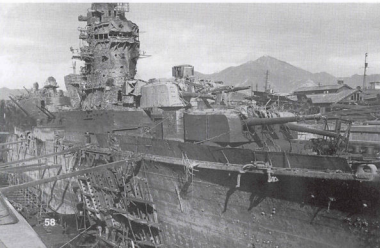




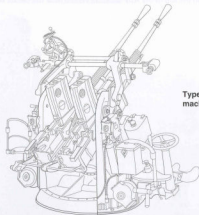
Oyodo stands by the listing fleet carrier *Zuikaku* during the Battle of Cape Engaño on 25 October 1944. The light cruiser was transferring Vice Admiral Ozawa and his staff from the

stricken carrier which sank later that day after taking more damage.

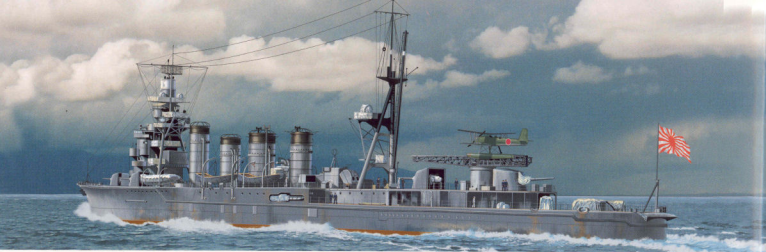
Oyodo being scrapped on 17 January 1948 at the former Kure Navy Yard. The patch fitted over bomb damage prior to towing can be seen on the starboard side. The *Mogami*-type triple turrets are of interest as are the wind baffles below the bridge and the radar antenna above the bridge. The funnel appears to be missing.



Anti-aircraft Armament



Type 96 double 25 mm
machine gun mount



(Above) *Alaka* supports the invasion of Christmas Island on 1 April 1942. Shortly after this successful operation, the light cruiser was struck by a torpedo fired by the submarine USS *Seawolf* which blew a 3-foot hole in the starboard side, putting *Alaka* in drydock until 5 April 1943.

(Below) *Yahagi* leads eight Sentai 2 destroyers of the screening force for the super battleship *Yamato* during the famous "last sortie" of the Imperial Japanese Navy. The force was overwhelmed by U.S. carrier aircraft on 7 April 1945, resulting in the sinking of *Yamato* and *Yahagi* well short of the invasion beaches of Okinawa.

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